军事英语视听说

Military English: Viewing, Listening, Speaking

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内 容 简 介

本书共 8 个单元，内容涵盖接待外国军事使团、参加外国军事招待宴会、红旗军演、美国空军第五代战斗机、地空导弹系统、赛博空间、维和行动、新军事战略等主题，旨在全方位训练学员的军事英语听、说、读、写、译等各项技能，培养学员的军事素养和国际视野。

本书适合作为军队院校，尤其是空军院校非英语专业学员的教材，也适合高校非英语专业国防生及部队参加对外军事交流的官兵使用。

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前　言
Preface

新军事变革的关键在于人才。在新军事变革的大潮中，越来越多的国际军事交流更加突显军事人才的关键地位与重要作用。培养新型军事人才，提高军人综合素质就成为当前军队院校教育的首要任务。英语作为一种国际性的交流工具，对我军的对外交流、提高军事技术、应用现代高科技武器装备具有不可替代的作用。

本书的编写以“输出为驱动”的全国外语教学改革要求为指导，教学活动设计体现“任务体验式教学模式”的特点，选材紧贴学员未来岗位任职及国际军事交流的实际，兼具知识性、专业性和实用性，语言规范、语料真实；利用文字、图片和视频素材，创设生动立体化的军事英语学习情境。学习任务设计本着以学员为中心，以能力培养为目标的原则，综合考虑学员的认知规律，以及学习任务的真实性、可行性和有效性，设计难度相当、贴近实际的多样化军事英语学习任务，引导学生在“用中学”；从阅读输入到视听输入，递进式穿插口语输出任务，让学员感受到军事英语学习的乐趣和实际意义。

本书按主题分为 8 个单元，包括接待外国军事使团、参加外国军事招待宴会、红旗军演、美国空军第五代战斗机、地空导弹系统、赛博空间、维和行动、新军事战略等。每个单元分别由 Warming-up Activities、Focus、Speech Platform、Reference Bank、Words and Phra-

ses 五个部分组成。其中，Warm-up 部分通过任务牵引式主题讨论导入，开拓思维，激发兴趣，进行语言准备；Focus 部分由 3 ~ 5 个视频片段组成，针对每个视频片段有形式多样的听说练习，并配有文化点津（Cultural Tips）、典型句式（Useful Expressions）和策略引导（Strategy Box），供学生在听说练习中借鉴运用，听力练习考查对视频内容的理解和分析，泛听与精听有机结合，各有侧重，泛听以抓大意、理框架为目的，精听注重听力技巧学习和视频语言学习，该部分还设计了主题讨论环节，侧重对相关话题的延伸理解；Speech Platform 以个人陈述、小组讨论或者角色扮演等形式进一步巩固语言输出能力，综合运用单元的语言知识和语言技巧引导学生独立思考，培养创新性思维，此部分可安排学生课下准备，课上演示；Reference Bank 提供相关主题的补充材料，辅助学员自主学习，增进对该主题知识的全面掌握；Words and Phrases 部分提炼了单元的生词和短语，方便学员自查和复习。

由于时间仓促，加之编者水平有限，书中疏漏和不当之处在所难免，敬请读者不吝指正。

本书视频资料免费领取联系邮箱为：militaryenglish@163. com

编　者

2017 年 3 月

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Unit 1　Receiving a Foreign Military Delegation
接待外国军事使团

Warming-up Activities

Look at the picture and answer the following questions. You may discuss with your group-mates.

1. What should you get to know about a foreign military delegation to prepare an appropriate welcome speech? And what should you say in your welcome speech?
2. If you are going to receive a foreign military delegation, what would you introduce about your military academy?
3. You are going to show around your academy, what is your plan?

Focus 1　Welcoming the Visiting Delegation

Cultural Tips

The procedure of receiving a foreign military delegation

Step 1　Welcoming the visiting delegation

Step 2　Brief introduction and discussion

Step 3　Exchanging souvenirs

Step 4　Showing around

Step 5　Presentation and farewell

1. *Before welcoming the delegation, what should you get to know about a foreign military delegation to prepare an appropriate welcome speech? Watch Video Clip 1 and answer the question.*

Question: Besides what has been mentioned in the video, what else do you think you should get to know when receiving a foreign military delegation?

2. *What should you say in your welcome speech? Watch Video Clip 2 and fill in the form according to your understanding.*

The first thing	
Then	
After that	
The last thing	

3. *Watch Video Clip 3. Take notes and complete the gap-filling task.*

Topic: a welcome speech to a famous baseball player to the University of Texas at Austin

(1) To express pleasure in having the visitors:

(2) Compliments to the visitors:

(3) Brief introduction of the place being visited:

(4) Goodwill to the visit:

4. *Now you are going to receive a delegation from the West Point. The delegation is led by the president of U. S. Military Academy at West Point, lieutenant general David H. Huntoon. Other members of the delegation are major colonel Michael McDermott, the assistant of the president, madam Maureen Fitzgerald, the strategic liaison officer and major colonel Adrie Lam, American military attaché in China. Try to prepare an appropriate welcome speech according to what you have learned in the previous activities.*

Strategy box

Expressing gladness in having the visitors:

We are so excited/We are thrilled/We are beyond delighted about having your delegation (to visit our barracks/our academy).

Useful expressions

- ✧ It is a great pleasure for me to welcome (delegation) here to (name of place).
- ✧ We are absolutely thrilled to have (delegation) come to...
- ✧ It's an exciting/rewarding/precious opportunity for all of us to... (learn from each other).
- ✧ (Delegation) is one of the finest/major (achievements of the visitors).
- ✧ We hope sincerely, that you will find your visit here interesting and unique.
- ✧ Wish you a successful visit here in China.
- ✧ Wish the delegation a pleasant and profitable visit today.

Focus 2 Brief Introduction and Discussion

Cultural Tips

When all the visitors are seated, routinely the host will brief the guests the place they are visiting. After that, the guests may raise questions for the host to answer.

1. *Watch Video Clip 4 and listen to a brief introduction of the Academy of West Point. Seven aspects about the academy and the cadets have been mentioned. Your task is to take notes according to the seven major points.*

(1) Values of the academy:

(2) Education (teaching faculty, majors, etc.):

(3) Practical experience:

(4) Goal of learning:

(5) Athletics:

(6) Rank after graduation:

(7) Fields of working after graduation:

2. *Watch Video Clip 4 again, complete your notes and deliver a brief introduction about the West Point based on the notes you have taken.*

Cadets will get _____ experiences, _____ training, _____ spirit, and _____ in their training in the West Point.

Strategy box

Choose the adjectives that describe the cadet life in the West Point.

□ easy □ tough □ worthy □ challenging
□ rewarding □ intense □ effective
□ persistent □ casual □ exciting
□ demanding □ trying

Focus 3 Showing Around

Cultural Tips

After the brief introduction, and the question and answer session, the host and the guest will exchange souvenirs. Usually the gifts are the plaque, emblem of the armed forces they represent separately.

After that, the guests may raise questions for the host to answer.

1. *You are going to be shown around the Air Force Academy of the United States, watch Video Clip 5 and find out what aspects of the academy have been mentioned.*

(1) _____

(2) _____

(3) _____

(4) _____

(5) _____

(6) _____

(7) _____

2. *Watch Video Clip 5 again and finish the following questions.*

(1) In 1954 America's newest (service/military) _____ academy was established.

(2) Nestled against the eastern slope of Rocky Mountains, the campus (consists/is comprised of) _____ 18,000 acres.

(3) The proud (history/heritage) _____ of the academy includes the accomplishments of military aviation pioneers. Air Force Academy (graduates/famous alumni) _____ include a medal of honor winner and many astronauts.

(4) The goal of the academy is to produce officers to have _____.

A. knowledge B. motivation C. integrity D. sense of hegemony

(5) What qualities of character of a professional military officer must have?

A. integrity first B. service before self C. commitment to excellence

(6) How do the cadets get the first-hand experiences?

_____

(7) What are the rank and degree of the graduates?

_____

3. *Now Video Clip 5 is going to be mute, prepare in your groups with*

the help of the previous two activities and each group chooses a representative to dub for the video.

Cultural Tips

After showing the guests around the barracks, the host and the guests may have dinner together, and then the host may bid farewell to the guests.

The standard farewell phrase can be as follows:

"Owing to your tight schedule, it's a pity that we have to conclude today's visit."

"Major general Jones, it is great pleasure to have you and your delegation with us. And this visit has enhanced our mutual understanding. Hope you have a nice trip in China and see you again!"

Speech Platform

1. *Group Discussion*

Based on the above listening understanding, now if you are going to receive a foreign military delegation to visit our university, what aspects will you introduce to them about our university? And why?

2. *Critical Thinking*

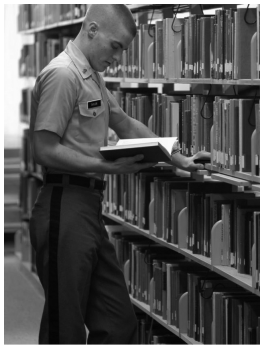
What do you think of the value of the West Point? And how do you think about the requirement of the cadets in Air Force Academy of the US— "integrity first, service before self and commitment to excellence"?

3. *Role Play*

Now prepare a role play with your group-mates. Some of you are guides and some are guests to visit your university. Conduct the visit ac-

cording to the previous procedure and choose from the following places that you would choose to show the guests around.

laborary



library

dining hall

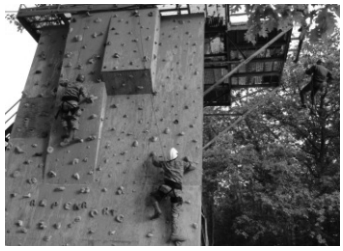
stadium

campus

gymnasium

shooting range

dormitory



rock climbing

Words and Phrases

thrilled	非常兴奋的；极为激动的
profitable	有益的；有用的
fabulous	极好的；绝妙的
military attaché	武官

Austin	奥斯汀市（美国得克萨斯州首府）
cadet	军校学员
Hudson River	哈德逊河（美国纽约州的大河）
to hone	磨练
to intersect	交叉；交汇
reflex	反应力
civilian	平民的；文职
lieutenant	（美空军）中尉
intramural	校内的
infantry	步兵
intercollegiate	校际的
Colorado Springs	科罗拉多斯普林斯市
parachute	跳伞；降落伞
Rocky Mountains	洛基山脉
service	军种；服役

Reference Bank

1. West Point

The United States Military Academy at West Point (also known as USMA, West Point or Army) is a four-year coeducational federal service academy located in West Point, New York. The academy sits on scenic high ground overlooking the Hudson River, 50 miles (80 km) north of New York City. The entire central campus is a national landmark and home to scores of historic sites, buildings, and monuments. The majority of the campus's neogothic buildings are constructed from gray and black granite. The campus is a popular tourist destination complete with a large visitor center and the oldest museum in the United States Army.

Candidates for admission must both apply directly to the academy and receive a nomination, usually from a Senator or Representative. Students

are officers-in-training and are referred to as cadets. Tuition for cadets is fully funded by the Army in exchange for an active duty service obligation upon graduation. Approximately 1,300 cadets enter the Academy each spring with about 1,000 cadets graduating.

The academic program grants a bachelor of science degree with a curriculum that grades cadets' performance upon a broad academic program, military leadership performance, and mandatory participation in competitive athletics. Cadets are required to adhere to the Cadet Honor Code, which states that "a cadet will not lie, cheat, steal, or tolerate those who do." The academy bases a cadet's leadership experience as a development of all three pillars of performance: academics, physical, and military.

Most graduates are commissioned as second lieutenants in the Army. Foreign cadets are commissioned into the armies of their home countries. Since 1959, cadets have also been eligible to "cross-commission", or request a commission in one of the other armed services, provided they meet that service's eligibility standards. Every year, a small number of cadets do this, usually in a one-for-one "trade" with a similarly inclined cadet or midshipman at one of the other service academies.

Because of the academy's age and unique mission, its traditions influenced other institutions. It was the first American college to have class rings, and its technical curriculum was a model for later engineering schools. West Point's student body has a unique rank structure and lexicon. All cadets reside on campus and dine together en masse on weekdays for breakfast and lunch. The academy fields fifteen men's and nine women's National Collegiate Athletic Association (NCAA) sports teams while every student competes in at least one sport, either at intramural or intercollegiate level, each semester. Its football team was a national power in the early and mid-20th century, winning three national championships. Its alumni and students are collectively referred to as "The Long Gray

Line" and its ranks include two Presidents of the United States, numerous famous generals, and seventy-four Medal of Honor recipients.

2. Royal Air Force Academy

(1) The United States Air Force Academy (USAFA or Air Force) is an accredited college for the undergraduate education of officer candidates for the United States Air Force. Its campus is located immediately north of Colorado Springs in El Paso County, Colorado, United States. The Academy's stated mission is "to educate, train, and inspire men and women to become officers of character, motivated to lead the United States Air Force in service to our nation." It is the youngest of the five United States service academies, having graduated its first class in 1959. Graduates of the Academy's four-year program receive a Bachelor of Science degree, and most are commissioned as second lieutenants in the United States Air Force. The Academy is also one of the largest tourist attractions in Colorado, attracting more than a million visitors each year.

The Air Force Academy is among the most selective colleges in the United States. U. S. News and World Report recently ranked it tied for 5th place in the category Undergraduate Engineering Programs. Forbes magazine, in 2009, ranked the Academy the Number 2 public college in the United States and the Number 7 college overall in its "America's Best Colleges 2009" publication. Candidates for admission are judged on their academic achievement, demonstrated leadership, athletics and character. To gain admission, candidates must also pass a fitness test, undergo a thorough medical examination, and secure a nomination, which usually comes from the member of Congress in the candidate's home district. Recent incoming classes have had about 1,400 cadets; historically just under 1,000 of those will graduate. Tuition along with room and board are all paid for by the U. S. government. Cadets receive a monthly stipend, but incur a commitment to serve a number of years of military service after graduation.

The program at the Academy is guided by the Air Force's core values of "Integrity First, Service Before Self, and Excellence in All We Do", and based on four "pillars of excellence": military training, academics, athletics and character development. In addition to a rigorous military training regimen, cadets also take a broad academic course load with an extensive core curriculum in engineering, humanities, social sciences, basic sciences, military studies and physical education. All cadets participate in either intercollegiate or intramural athletics, and a thorough character development and leadership curriculum provides cadets a basis for future officership. Each of the components of the program is intended to give cadets the skills and knowledge that they will need for success as officers. (from www. Wikipedia. com)

(2) The Air Force Academy is both a military organization and a university. Much of the Academy is set up like most other Air Force bases, particularly the 10th Air Base Wing, but the superintendent, commandant, dean of faculty and cadet wing are set up in a manner resembling a civilian university.

The Superintendent is the Academy's commanding officer and is responsible for the Academy's regimen of military training, academics, athletic and character development programs.

The Commandant oversees the 4,400-member cadet wing and more than 300 Air Force and civilian support personnel and is responsible for cadet military training and Airmanship education, supervising cadet life activities and providing support to facilities and logistics.

The Dean of Faculty commands a 700-person mission element and oversees annual course design and instruction of more than 500 courses crossing 32 academic disciplines and directs the operation of five support staff agencies and faculty resources involving more than $250 million.

The 10th Air Base Wing comprises more than 3,000 military, civilian

and contract personnel who conduct all base-level support activities, including law enforcement and force protection, civil engineering, communications, logistics, military and civilian personnel, financial management, services and the clinic, for a military community of about 25,000 people. (from http://www. usafa. af. mil)

3. Military Ranks in China, UK, US

中国军衔中英文对照表（海、陆、空）

军衔 Ranks	陆军 Army	海军 Navy	空军 Air Force
上将	General	Admiral	General
中将	Lieutenant General	Vice Admiral	Lieutenant General
少将	Major General	Rear Admiral	Major General
大校	Senior Colonel	Senior Captain	Senior Colonel
上校	Colonel	Captain	Colonel
中校	Lieutenant Colonel	Commander	Lieutenant Colonel
少校	Major	Lieutenant Commander	Major
上尉	Captain	Lieutenant	Captain
中尉	First Lieutenant	Lieutenant, Junior Grade	First Lieutenant
少尉	Second Lieutenant	Ensign	Second Lieutenant
军事长	Master Sergeant	Chief Petty Officer	Master Sergeant
专业军士	Specialist Sergeant	Specialist Petty Officer	Specialist Sergeant
上士	Sergeant, First Class	Petty Officer, First Class	Technical Sergeant
中士	Sergeant	Petty Officer, Second Class	Staff Sergeant
下士	Corporal	Petty Officer, Third Class	Corporal
上等兵	Private, First Class	Seaman, First Class	Airman, First Class
列兵	Private	Seaman, Second Class	Airman, Second Class

美、英空军军衔对照表

U. S. Air Force	美国空军	Air Force of UK	英国空军
General of Air Force	五星上将	Marshal of the Royal Air Force	元帅
General	上将	Air Chief Marshal	上将
Lieutenant General	中将	Air Marshal	中将
Major General	少将	Air Vice Marshal	少将
Brigadier General	准将	Air Commodore	准将
Colonel	上校	Group Captain	上校
Lieutenant Colonel	中校	Wing Commander	中校
Major	少校	Squadron Leader	少校
Captain	上尉	Flight Lieutenant	上尉
First Lieutenant	中尉	Flying Officer	中尉
Second Lieutenant	少尉	Pilot Officer	少尉
Chief Master Sergeant	军士长	Warrant Officer (Class I)	一级准尉
Senior Master Sergeant	军士长	Warrant Officer (Class II)	二级准尉
Master Sergeant	军士长	Flight Sergeant	上士
Technical Sergean	上士	Sergeant	中士
Staff Sergeant	中士	Corporal	下士
Sergeant	下士	Senior Aircraftman	一等兵
Airman First Class	一等兵	Leading Aircraftman	二等兵
Airman Basic	三等兵	Aircraftman	新兵

Unit 2　Attending Military Receptions
参加外国军事招待宴会

Warming-up Activities

Look at the picture and answer the following questions. You may discuss with your group-mates.

1. What do you know about the normal functions of military receptions?
2. Do you know how to address the officers who you know their names and ranks in formal banquets?
3. If you are the leader of a visiting delegation to a foreign nation, and in the beginning of the banquet you are invited to deliver a speech, what will you say?

Hosting speech

Cultural Tips

In the very beginning of a formal banquet, the host will give a welcoming speech which will focus on the significance of the banquet and welcome the guest speaker to deliver a friendly speech.

1. *Now you are going to watch Video Clip 1 of the United States Military Academy Graduation Family Banquet. Listen to it and find out who the host of the banquet is and what the major points are that the host has covered.*

Hints

Greetings: _____

Introduction to guests: _____

Comments on the Event: _____

Introduction to guest speaker: _____

2. *Watch Video Clip 1 again and dictate the missing words.*

Ladies and gentlemen, _____.

_____ the 58th superintendent of the United States Military Academy _____ David H. Huntoon.

Thank you.

Well good evening, Mrs. Obama, Secretary McHugh, other _____, families and friends, class 2011, _____ _____ in the USMA at West Point. We have had 5 glorious days of precipitation and at the very special moment this morning as the graduating class moved forward the sun cleared. _____ _____ and we are going to Mickey stadium tomorrow morning.

Ladies and gentlemen, _____ the First Lady of United States Mrs. Michelle Obama. This may be Mrs. Obama's first visit to West Point, but she knows well our military

basis and our military families. In fact, she is a _____ _____ of our soldiers and their families around the world.

Ladies and gentlemen, _____ _____ for the First Lady of United States.

3. *Now you are hosting a formal banquet to welcome a visiting delegation from the West Point to our academy. The leader of the delegation is the superintendent of the West Point. You may use the following expressions.*

Strategy box

General Structure in Guest speeches:

✓ *Showing Appreciation of the invitation*

✓ *Commenting on the event*

✓ *Bidding good wishes for the event*

Useful expressions

Ladies and gentlemen, may I have your attention please.

It's my pleasure to introduce.../ it is my great privilege to introduce our guest speaker...

Well, good evening, honorable..., ..., and other distinguished guests.

We are so pleased to welcome you to...

Please join us in a warm (West Point) welcome for...

Focus 2 Guest Speech

Cultural Tips

At the invitation of the host of the banquet, one representative, usually the leader of the visiting delegation will deliver a guest speech to thank the warmness of the host party and also touch upon the significance of the visit.

1. *If you are the guest speaker, to the welcome speech, what would you say?*

_____

2. *Now you are going to listen to the guest talk in the United States Military Academy Graduation Family Banquet which is delivered by Michelle Obama in Video Clip 2. Dictate the missing words.*

Thank you. Thank you so much. Hello, everyone!

Thank you for this wonderful welcome. _____.

_____. I also want to thank Secretary of the Army John McHugh, the Class of 1961 bar presenters, all of our distinguished guests, all of the parents, families, friends _____ and of course _____ _____ United States Military Academy. It's _____. _____ West Point. It will not be my last. And _____ _____, for this academy, for your families, for this country. As I look around the cadets in this room, very very good-looking group, by the way, it is very clear to me you all reflect everything we hope to see in ourselves and in our country, _____ _____ and _____, a strong body and a ferocious mind, the devotion to country and to family, and _____

from R-day to your last exam during T week. For all of you, I know, this is a _____ journey, a journey full of _____ _____, a journey that has taken you across the country and around the world. You've learned new skills and you've immersed yourselves in new cultures which will serve you well on today's _____ _____.

3. *If you are visiting the United States Air Force Academy (USAFA) and you are invited to deliver a guest speech, what would you say? Prepare in your groups and deliver a guest speech which will enhance the relationship between your academy and the USAFA.*

Focus 3 Banquet Etiquettes

Cultural Tips

After the host's welcome speech and the guest speech, the banquet starts. Officers may start enjoying the dinner and have a chance to have exchanges with officers from other nations.

1. *Self-introduction. In formal banquet or in informal cocktails, you should introduce yourself to start your conversation with the others. As a military officer, how should you introduce yourself? Listen to the following self-*

introductions in Video Clip 3 and write down the introductions of all the servicemen.

(1) _____

(2) _____

(3) _____

(4) _____

(5) _____

(6) _____

(7) _____

(8) _____

(9) _____

2. *Banquet Etiquettes. In the following part, you are going to watch several short Video Clips 4-7 about banquet etiquettes. Watch and finish the TRUE or FALSE questions.*

(1) How to cut the meat and vegetables?

(　　) When youwant to take one bite of food, the fork is on your right hand with the knife on the other.

(　　) When you are resting during the dinner, the edge of the fork is on the edge of the plate.

(2) How to drink water or wine?

(　　) For the sake of politeness, we should hold the stem of the glass when we are drinking.

(　　) Your glass of water will always be filled by the waiter without asking.

(3) When to have small talks?

(　　) When you are havingbreakfast with others, make small talk until people have their coffee, water or juice at the table.

(　　) When you arehaving dinner with someone at a business meal, make small talk when the meal is over.

(4) Sensitive topic not to talk about?

(　　) Women in the workplace today often wear wedding rings just because they don't want to be asked if they are single or to be probed about their personal life.

(　　) It is polite to ask general questions like "How's your summer? ".

Speech Platform

1. *During the banquet, you may have the opportunities to have small talks with officers from other nations. If you want your conversation to go smoothly, asking follow-up questions is a very useful skill. Now think of at least two possible follow-up questions for each statement below.*

Example:

—I read a book recently, but it was terrible.

—Oh, really? What book did you read? / Why didn't you like it?

(1) China is a fantastic country.

_____

(2) Chinese people are quite friendly.

_____

(3) The PLA's ability to tackle with the natural disaster is very impressive.

_____

(4) Our two nations have always been on good terms.

_____

(5) Military cooperation between our two air forces is mutually beneficial.

_____

2. *Arguing your point. During your small talk you may agree or disagree with the other's opinion. Generally in order to show respect we don't argue with the other guests. However, when some sensitive topics have been touched on, such as topics related to our sovereignty and integrity of the territory, we should politely but resolutely show our national defense policy. Use the useful expressions to talk on the following 2 topics:*

a. Military exercises will lead to war.

b. Cyber attack is almost impossible to tackle with.

Expressions showing opinions	Expressions arguing your points
I think…	You may be right, but …
I believe that …	I may be wrong, but …
From my point of view …	I agree to some extent, but …
It seems to me that …	Yes, but …
In my opinion …	I know what you mean, but …

3. *Role Play*

Situation: China and Pakistan are going to hold the "Youyi" joint military exercise. The brigade-level military exercise by the People's Liberation Army's 101 Engineering regiment will begin two days later and will continue for one month. This joint military exercise is launched barely 25km from the international border along Jaisalmer-Bikaner districts of Rajasthan.

Tasks: Now you are divided into two groups. One represents Pakistan and the other represents China. The Pakistan party is holding a reception banquet to welcome their counterpart from China. Each group chooses

one representative to deliver a host speech and a guest speech separately. Then all the group members may have self-introductions to members of the other group and conduct small talks during the banquet. Try to use the useful expressions you have learned in the previous activities.

Role 1: Host speaker from Pakistan Air Force

Role 2: Guest speaker from PLA Air Force

Role 3: (the other students) Officers from two sides present at the banquet

Reference Bank

1. Tips for Small Talk

Small talk generally starts with conversation about topics such as the weather, hobbies and other interests. There are two ways to get another person to talk. First, you could ask a general yes/no question. Second, you could ask an open-ended question. In both cases, you will want to ask follow-up questions to further the conversation. It is best to choose a topic that you know a little bit about, so that you can follow the other person's response with your own point of view.

When thinking of follow-up questions, the following key words can be used to build upon: How? Why? Where? When? Meaning? And?

Remember, though, to always listen carefully to what the other person has to say. Only formulate your question once the person has finished speaking, because what he says may affect what you ask next.

While talking, remember to show interest and encourage the other person to speak by smiling and nodding during the conversation.

If there isn't a natural follow-up question, and the other person is still speaking, interject statements such as "Tell me more" or "Sounds interesting" to encourage the other person.

2. The major components of the U. S. Air Force (updated to August 28, 2015)

◇ Active duty forces

➢ 57 flying wings, 8 space wings, and 55 non-flying wings

➢ 9 flying groups, 8 non-flying groups

● 134 flying squadrons, 43 space squadrons

◇ Air Force Reserve

➢ 35 flying wings, one space wing

➢ 4 flying groups

● 67 flying squadrons, 6 space squadrons

◇ Air National Guard

➢ 87 flying wings

● 101 flying squadrons, 4 space squadrons

3. Operational Organization of the US Air Force

主司令部	command
编号空军	(first to twenty-fourth) Air Force
联队	wing
大队	group
中队	squadron

4. 外事宴请常识

宴请是国际交往中最常见的交际活动形式之一。各国宴请都有自己国家或民族的特点习惯。国际上通用的宴请形式有宴会、招待会、茶会、工作进餐等。举办宴请活动采用何种形式，通常根据活

动目的、邀请对象、经费开支等因素而定。

1）常见的几种宴请形式

（1）宴会（英文称为 Banquet 或 Dinner）

宴会为正餐，坐下进食，由招待员顺次上菜。宴会有国宴、正式宴会、便宴之分。按举行的时间，又有早宴（早餐）、午宴、晚宴之分。其隆重程度、出席规格、菜肴的品种与质量等均有区别。一般来说，晚上举行的宴会比白天举行的更为隆重。

国宴（State Banquet）是国家元首或政府首脑为国家的庆典，或为外国元首、政府首脑来访而举行的正式宴会，规格最高。宴会厅内悬挂国旗，安排乐队演奏国歌及席间乐。席间致辞或祝酒。

正式宴会（Banquet，Dinner）除不挂国旗、不奏国歌及出席规格不同外，其余安排大体与国宴相同。有时也安排乐队奏席间乐。宾主均按身份排位就座。许多国家正式宴会十分讲究排场，在请柬上注明对客人服饰的要求。外国人对宴会服饰比较讲究，往往从服饰规定体现宴会的隆重程度。通常菜肴包括汤和几道热菜（中餐一般用四道，西餐用二三道），另有冷盘、甜食、水果。外国宴会餐前上开胃酒，席间佐餐一般多用红、白葡萄酒，很少用烈性酒，尤其是白酒。我国在这方面做法较简单，餐前如有条件，在休息室稍事叙谈，通常上茶和汽水、啤酒等饮料。

便宴，即非正式宴会，常见的有午宴（Luncheon）、晚宴（Supper），有时也有早上举行的早餐（Breakfast）。这类宴会形式简便，可以不排席位，不作正式讲话，菜肴道数也可酌减。西方人的午宴有时不上汤，不上烈性酒。便宴较随便、亲切，宜用于日常友好交往。

（2）招待会（Reception）

招待会是指各种不备正餐的较为灵活的宴请形式，备有食品、酒水饮料，通常都不排席位，可以自由活动，常见的有冷餐会和酒会。

冷餐会（自助餐）（Buffet，Buffet-dinner）。这种宴请形式的特

点是不排席位，菜肴以冷食为主，也可用热菜，连同餐具陈设在菜桌上，供客人自取。客人可自由活动，可以多次取食。酒水可陈放在桌上，也可由招待员端送。冷餐会可在室内或在院子里、花园里举行，可设小桌、椅子，自由入座，也可不设座椅，站立进餐。根据主、客双方身份，招待规格隆重程度可高可低，举办时间一般在中午十二时至下午二时、下午五时至七时。这种形式常用于官方正式活动，以宴请人数众多的宾客。

酒会，又称鸡尾酒会（Cocktail）。这种招待会形式较活泼，便于广泛接触交谈。招待品以酒水为主，略备小吃。不设座椅，仅置小桌（或茶几），以便客人随意走动。酒会举行的时间也较灵活，中午、下午、晚上均可，请柬上往往注明整个活动延续的时间，客人可在其间任何时候到达和退席，来去自由，不受约束。

（3）茶会（Tea Party）

茶会是一种简便的招待形式。举行的时间一般在下午四时左右（也有上午十时举行的）。茶会通常设在客厅，不用餐厅。厅内设茶几、座椅，不排席位，但如是为某贵宾举行的活动，入座时，可有意识地将主宾同主人安排到一起，其他人随意就座。茶会顾名思义是请客人品茶，对茶叶、茶具的选择要有所讲究，或具有地方特色，一般用陶瓷器皿，不用玻璃杯，也不用热水瓶代替茶壶。外国人一般用红茶，略备点心和地方风味小吃。也有不用茶而用咖啡的，其组织安排与茶会相同。

（4）工作进餐

工作进餐是现代国际交往中经常采用的一种非正式宴请形式（有的时候由参加者自付费），按用餐时间分为工作早餐、工作午餐、工作晚餐（Working Breakfast，Working Lunch，Working Dinner），利用进餐时间，边吃边谈问题，在代表团访问中，往往会因日程安排不开而采用这种形式。

2）宴请程序及现场工作

主人一般在门口迎接客人。主人陪同主宾进入宴会厅，全体客

人就座，宴会即开始。

如有正式讲话，则各国安排讲话的时间不尽一致。一般正式宴会可在热菜之后、甜食之前由主人讲话，接着由客人讲，也有一入席双方即讲话的。冷餐会和酒会讲话时间则更灵活。

吃完水果，主人与主宾起立，宴会即告结束。

Words and Phrases

superintendent	校长
lieutenant general	中将
Secretary of the Army	（美国）陆军部长
ferocious	【口】非常的；惊人的
R-day（reception day）	入学日
immerse	沉浸在
Maritime Corps	海军陆战队
senior airman	（美国）空军下士
forward assigned	部署在前沿的
sergeant	（美国）空军下士
station	驻扎
major	少校
deployment	部署
base	基地
day in and day out	日日夜夜
tine	齿；尖头
stem	杯脚

Unit 3　Red Flag Exercise
红旗军演

Warming-up Activities

Look at the picture and answer the following questions. You may discuss with your group-mates.

1. What do you know about Red Flag Exercise?
2. Do you know anything about the participants in Red Flag Exercise?
3. What are the general procedures of a session of Red Flag Exercise?

Focus I　Brief Introduction to Red Flag Exercise

1. *Watch Video Clip 1 and fill in the following missing information.*

United States Air Force pilots are a (1) _____. They represent (2) _____ in a deadly plane field. As the world becomes ever more dangerous, their actions and those of their (3) _____ and (4) _____ become more and more crucial to success in combat. Less than 6 miles from Las Vegas strip, extraordinary (5) _____ take place. Pilots and crews train in the world's most (6) _____ war game arena ever devised. It's called Red Flag. And depicts the best of the best in (7) _____. Designed to (8) _____

_____ actual warfare unprecedented (9) _____.

2. *Watch Video Clip 2 and find out the answers to the following questions.*

(1) Where was the Red Flag held?

_____

(2) What was the plan designed for?

_____

(3) What kind of combat environment the speaker had mentioned in the video?

_____

3. *Watch Video Clip 1&2 again, then introduce the Red Flag Exercise to your classmates. You may refer to the useful expressions and patterns given below.*

Strategy Bank

A military exercise or war game is the employment of military resources in training for military operations, either exploring the effects of warfare or testing strategies without actual combat. The introduction to a military exercise will generally follow a pattern similar to the following:

Significance→Objectives→Participants→Location→Frequency and Length→Scenario→Aircraft Involved

The following expressions may also help you to organize. your thoughts.

(The Red Flag) was held at.../...was chosen for the program/...was well-known for its.../The plan was for.../...were assigned as the aggressons to...

Focus 2 Detailed Information about Red Flag Exercise

1. *Read the following statements. Watch Video Clip* 3 *and decide*

whether the statements are true or false. Fill in the brackets with T (True) or F (False) and correct the false statements.

(1) Each Red Flag session lasts about 14 days. (　　)

(2) There are about 150 aircraft participate in the Red Flag exercise. (　　)

(3) About 115 pilots fly every day. (　　)

(4) A mixed group of fighters, bombers, tankers and helicopters that will deploy overseas as a unit in any crisis. (　　)

(5) The goal of the Red Flag exercise is to unite them together into a cohesive team. (　　)

2. *Watch Video Clip 4 and find out the answers to the following questions.*

(1) What kind of aircraft does the Blue Force fly?

_____

_____

(2) What kind of missile does the aircraft of the Blue Force carry?

_____

_____

(3) What is the aim of HARM?

_____

_____

(4) What kind of aircraft do the Red Aggressors fly?

_____

_____

3. *Suppose you were the commanding officer of a military exercise, you are going to give all the participants an information briefing, get yourself prepared and deliver your briefing to all your classmates.*

Strategy Bank

Information briefings simply provide information to the listeners. The objective of the briefing is the listener's understanding of the topic presented. Generally, the speaker offers no recommendations nor asks for any decisions. The briefing will be longer or shorter depending on the complexity of the topic, and the familiarity of the listeners with necessary background information. The information briefing will generally follow a pattern similar to the following:

(1) **Introduction**: greet the listeners and introduce the speaker; introduce topic and scope of the briefing; outline the main points to be covered.

(2) **Body**: present information in a logical sequence; avoid speaking about irrelevant information or topics; use audio-visual aids as appropriate.

(3) **Conclusion**: summarize main points; ask for questions from listeners.

Focus 3 Other Information about Red Flag Exercise

1. *Watch Video Clip 5 and fill in the following missing information.*

A primary element of Red Flag is to replicate actual (1) _____ _____ on the Nellis range. Getting into Nellis, the (2) _____ _____ allows pilot and crews to see (3) _____ the actual weapons used against them. From (4) _____ to crude but effective hand-held (5) _____.

2. *Watch Video Clip 6 and try to translate the following famous sayings.*

Cultural Tips

***The Art of War*　孙子兵法**

The Art of War is an ancient Chinese military treatise attributed to Sun Tzu, a high-ranking military general, strategist and tactician, and it was believed to have been compiled during the late Spring and Autumn period or early Warring States period. The text is composed 13 chapters, each of which is devoted to one aspect of warfare. It has had an influence on Eastern and Western military thinking, business tactics, legal strategy and beyond.

(1) On the threat facility wall, there's a quote from Sun Tzu *The Art of War*. "If you know the enemy, and know yourself, you need not fear the result of a hundred battles. If you know yourself but not the enemy, for every victory gained you will also suffer defeat. If you know neither the enemy nor yourself, you will succumb in every battle."

(2) 攻其不备，出其不意。

(3) 能因敌变化而取胜者，谓之神。

(4) 善战者，致人而不致于人。

(5) 三军可夺气，将军可夺心。

Speech Platform

1. *Monologue*

Deliver a military briefing. Now you are the commander officer of the China-Pakistan joint military exercise. Today is the first day of joint military exercise. Prepare your briefing with the help of your group mates. Your briefing should include the goal, missions, and participants.

2. *Role Play*

The class will be divided into several groups and five students are a group. Suppose you are going to take part in an aerial exercise, and then you are having the briefing. Following are the roles you are going to play, each role is required to deliver a briefing on his/her field and get ready for the questions of other members.

Role A: Act as the commanding officer of the exercise

Role B: Act as a meteorological officer

Role C: Act as an ATC officer

Role D&E: Act as pilots

Reference Bank

1. Military Exercise—Red Flag 2016-1

2016's Red Flag series of exercises kicked off at Nellis AFB, Nevada on 25 January with Red Flag 16-1, the first of four exercises planned for Fiscal Year 2016.

This was a large, three week exercise with over 120 aircraft deployed to Nellis from 39 different units supported by over 2,400 personnel. Additionally, aircraft from a number of Nellis-based squadrons, plus others that were listed as operating from their home bases, also participated. As well as a large contingent of US Air Force aircraft, there were aircraft from

several Air National Guard (ANG) units, as well as from the US Navy. Also taking part were the UK's Royal Air Force (RAF) and the Royal Australian Air Force (RAAF).

The Red Flag series of exercises grew out of the Vietnam War and its primary aim is to provide new aircrews with their first ten combat sorties, which had been shown to be when they were most vulnerable. Although it started out as purely an air-to-air exercise, over the years it has evolved to take in all aspects of aerial warfare, and the exercises can include almost any aircraft in the US military's inventory, and also that of their coalition partners.

The units that deploy to Nellis do so under the Air Expeditionary Wing concept, and make up the Blue forces. For 16-1, the commander of the Air Expeditionary Wing (AEW) was Col Derek C. France, 325th Fighter Wing Commander, flying F-22A Raptors, and the vice commander was Group Captain Phil Gordon RAAF, Officer Commanding 81st Wing, an F/A-18A Hornet pilot.

The "enemy" is provided by the Red force under the 57th Adversary Tactics Group (ATG), which comprises a number of Aggressor Squadrons (AGRS), only one of which, the 64th AGRS, operates aircraft. Overseeing it all is the White force which uses the Nellis Air Combat Training System (NACTS), a sophisticated tracking system, to monitor all aspects of the simulated air battles. NACTS is also used for debriefing.

The action takes place over the Nevada Test and Training Range (NTTR), which occupies 2.9 million acres of land to the North of Las Vegas. In here can be found a range of targets, including mock airfields, parked aircraft, vehicle convoys, tanks, missile sites and bunkered defensive positions. There are also places to avoid within the NTTR, most notably the famous Area 51.

The exercise is run by the 414th Combat Training Squadron and ad-

ministered by the US Air Force Warfare Center. According to Lt Col Kevin "Flash" Gordon, 414th CTS deputy commander and former 64th AGRS commander, there were no major changes made for Red Flag 16-1 from previous exercises, only minor tweaks.

For 16-1, two missions were flown each day, one day and one night. Typically the Red forces will gather on the Western side of the ranges, and the Blue on the Eastern side. According to Lt Col Gordon, the aim is for the fight to last for 90 minutes so the aircraft are launched from 45 to 20 minutes before the start to achieve that window. A number will rendezvous with a tanker first and typically the profile will see the first ten minutes as an air-to-air fight to clear out the first wave of Red fighters, followed by Suppression of Enemy Air Defences (SEAD) aircraft before the strike aircraft run in to attack their targets. However, not all missions are the same, and each day has a different scenario; for example, some days the strike aircraft will be sent in first to draw out the Red fighters. As pointed out by GpCapt Gordon, with the exception of the B-1Bs, all the aircraft carry AMRAAMs (Advanced Medium Range Air to Air Missile), so all have a dual role.

Integration is what it's all about and, according to GpCapt Gordon, "over a week and a half I've seen it evolve from a bunch of people operating alongside each other to a team effort where we are really tightly integrated. The learning curve has been quite remarkable".

It isn't just about the aircrew though. According to Master Sergeant Kelly Martin of the 95th Fighter Squadron, an F-22A Raptor unit, it's a contested environment which poses challenges for the maintainers too, to replicate being down range. This can be something as simple as spoof telephone calls, asking someone to move a piece of equipment, to much more complex cyber threats.

For some, just getting to Nellis is a major logistical challenge and that is seen as part of the exercise. GpCapt Gordon again: "It took us one week to move 400 personnel and 14 aircraft half way around the world with three stops: Guam, Hawaii and Nellis. We were supported by our C-17s and KC-30s. We left on time and arrived on time."

Since the stand down of the 65th AGRS with their F-15 Eagles, other units are being tasked as part of the Red force. In some cases units act as Red air throughout the exercise. At other times individual squadrons provide a number of aircraft, either throughout the exercise or on specific days, to join the Aggressors. According to Col Kenny Smith, 57th Operations Group Commander, this doesn't pose any problems for them as they are used to taking on the opponent role at their home stations. They also get a comprehensive briefing from the 64th AGRS.

Units taking part in Red Flag 16-1 included:

95th Fighter Squadron "Boneheads", 325th Fighter Wing, Tyndall AFB, Florida, with 12 F-22A Raptors.

131st Fighter Squadron "Barnestormers", 104th Fighter Wing, Massachusetts ANG, Barnes ANGB, Massachusetts, with seven F-15Cs and one F-15D Eagle.

194th Fighter Squadron "Griffins", 144th Fighter Wing, California ANG, Fresno ANGB, California, with eight F-15Cs.

157th Fighter Squadron "Swamp Foxes", 169th Fighter Wing, South Carolina ANG, McEntire ANGB, South Carolina, with ten F-16C Fighting Falcons. They were employed in the Suppression of Enemy Air Defences (SEAD) role, and most were painted in the new Have Glass II scheme.

510th Fighter Squadron "Buzzards", 31st Fighter Wing, Aviano Air Base, Italy with 13 F-16Cs and an F-16D.

ANG/AFRC Test Centre (AATC), Arizona ANG, Tucson ANGB, Tucson, Arizona with six F-16Cs.

422nd Test and Evaluation Squadron, 53rd Wing, Nellis AFB, Nevada with F-16Cs and an F-16D.

9th Bomb Squadron "Bats", 7th Bomb Wing, Dyess AFB, Texas, with five B-1B Lancers.

335th Fighter Squadron "Chiefs", 4th Wing, Seymour Johnson AFB, North Carolina, with 14 F-15E Strike Eagles.

VAQ-138 "Yellow Jackets", NAS Whidbey Island, Washington, with five EA-18G Growlers.

No 3 Squadron, RAF Coningsby, England, with eight Tranche 1 Typhoon FGR4s. Four aircraft were from No 3 Squadron and four from No 11 Squadron.

The aircraft had deployed to Langley AFB, Virginia in late 2015 for Exercise Trilateral 2015, which saw No 11 Squadron participate. The aircraft were then flown to Nellis just before Christmas to await the start of Red Flag.

No 1 Squadron, 82nd Wing, RAAF Amberley, Australia, with six F/A-18F Super Hornets. Declared operational in December 2011 replacing the venerable F-111, this was the RAAF Super Hornet's Red Flag debut.

No 75 Squadron, 81st Wing, RAAF Tindal, Australia, with six F/A-18A Hornets.

Air-to-air refuelling support was provided by:

6th Air Mobility Wing, MacDill AFB, Florida, with two KC-135R Stratotankers.

22nd Air Refuelling Wing (ARW), McConnell AFB, Kansas, with two KC-135Rs.

There were a large number of Intelligence, Surveillance and Reconnaissance (ISR) assets taking part. For the first two weeks they rarely ventured out in daylight, but week three saw several of them flying in the daylight missions.

965th Airborne Air Control Squadron, 552nd Air Control Wing, Tinker AFB, Oklahoma, with two E-3G Sentries. The E-3G upgrade replaces 1970s computing technology with a current day, Windows-based system. It achieved Initial Operating Capability in July 2015 and this version made its first operational deployment to South-West Asia in November.

343rd Reconnaissance Squadron, 55th Wing, Offutt AFB, Nebraska, with one RC-135W Rivet Joint.

12th Airborne Command and Control Squadron, 461st Air Control Wing, Robbins AFB, Georgia, with one E-8C JSTARS.

41st Electronic Combat Squadron, 55th Electronic Combat Group, Davis Monthan AFB, Arizona, with one EC-130H Compass Call.

VP-1 "Screaming Eagles", NAS Whidbey Island, Washington, with one P-3C Orion fitted with the Littoral Radar Surveillance System (LSRS).

VQ-1 "World Watchers", NAS Whidbey Island, Washington, with one EP-3E Aries II.

VP-45 "Pelicans", NAS Jacksonville, Florida, with one P-8A Poseidon. This was the P-8's Red Flag debut.

No 5 (AC) Squadron, RAF Waddington, England, with one Sentinel R1.

No 8 Squadron, RAF Waddington, England, with one E-3D Sentry AEW1.

No 2 Squadron, 42nd Wing, RAAF Wiliamtown, Australia, with one E-7A "Wedgetail".

No 10 Squadron, 92 Wing, RAAF Edinburgh, Australia, with one AP-3C Orion.

Providing Combat Search and Rescue (CSAR) were:

79th Rescue Squadron, 563rd Rescue Group, Davis Monthan AFB,

Arizona, with two HC-130J Combat King IIs.

No 47 Squadron, RAF Brize Norton, England with one C-130J Hercules C4.

210th Rescue Squadron "The Second 10th", 176th Wing, Alaska ANG, Joint Base Elmendorf-Richardson, Alaska, with two HH-60G Pavehawks.

Other units operating from their home bases included:

13th Bomb Squadron "The Devils Own Grim Reapers", 509th Bomb Wing, Whiteman AFB, Missouri, with B-2A Spirits.

99th Reconnaissance Squadron, 9th Reconnaissance Wing, Beale AFB, California, with U-2S "Dragon Ladies".

12th Reconnaissance Squadron, 9th Reconnaissance Wing, Beale AFB, California, with RQ-4B Global Hawks.

348th Reconnaissance Squadron, 9th Reconnaissance Wing, Grand Forks AFB, North Dakota, with RQ-4B Global Hawks.

As usual the Red Force comprised the 64th Aggressor Squadron from Nellis flying the F-16C, augmented by a number of the Blue force units on a day-by-day basis. It's believed that some of both the California and Massachusetts ANG F-15Cs joined the Red force, as well as some F-16s. Mondays were Defensive Counter Air (DCA) days, and saw some of the strike aircraft, including F-15Es and B-1Bs, join the Red force.

Nellis hosted an important visitor during the exercise when Secretary of Defence Ash Carter paid a short visit. Speaking to the based airmen he said, "The key is readiness; that's the key to the Air Force today and tomorrow, and it happens here. What I'm asking the Air Force to do... is maintain a very high level of readiness, and that you get from Nellis. This is the only test range where you can bring it all together, not only all the kinds of aircraft you see on the ramps out there, but the satellites you don't see and the cyber (activity) you don't see. In today's world, all of that is

brought together only here at Nellis, so it's an enormously important installation. That is reflected in our budget, where we're adding $1 billion more for training of this kind over the next five years. That's going to support no fewer than 34 major exercises."

2. Military Exercise—Red Flag 2016-2

The second Red Flag exercise of 2016 took place February 29 through March 11 and included over 75 aircraft from 23 units of the US Air Force, Navy, Marines, Army and NATO partners which included the Turkish Air Force (TAF) and the Aeronautica Militare Italiana's (AMI-Italian Air Force). Red Flag exercises take place day and night for two to three weeks at Nellis Air Force Base, Nevada, to conduct realistic combat scenarios across the domains of air, space and cyber space.

The Italian Air Force participated with 8 of their Eurofighter EF 2000 Typhoons from 4° Stormo (4th Wing) based at Grosseto Air Base, Gioia del Colle. This was the first Red Flag to include the Italian Eurofighter Typhoon.

4° Stormo is the oldest wing in the Italian Air Force, which spans in excess of 80 years of continuous activity from 1931 through present day. 4° Stormo has two gruppi (squadrons) equipped with EF 2000 Typhoons, the 9th fighter squadron and the 20th Fighter Squadron. The 20th Fighter Squadron flies the two seat variant for training new pilots.

On March 16th 2004 4° Stormo became the first unit in AMI service to fly the Eurofighter EF2000 Typhoon. Designated as the F-2000A (single-seat) and F-2000B (twin-seat) by the Italian's. Italy has ordered 62 Eurofighters to date. The AMI was the first of any of the Eurofighter partner nations to establish a QRA facility. They were also the first to get NATO Quick Response Force certification and they were the first to provide air policing for NATO nations that were lacking the capability. The Typhoon replaces the F-104 Starfighters and F-16 Fighting Falcons that were part of

the "Peace Caesar" program on a 10 year lease from the US Air Force. The Typhoon offers a huge advance in capability over its predecessors as the AMI Typhoons are dedicated air superiority fighters. 4° Stormo supports NATO's "air policing" role involving Iceland and the Baltic states in addition to providing air defence for Albania and Slovenia since early in 2010. 4° Stormo is also involved in supporting Switzerland's limited QRA mission.

Besides its key partnership role in the Eurofighter program Italy is also a key player in the Lockheed Martin F-35 program assembling Italian F-35s at its Cameri Final Assembly and Checkout Facility. The first F-35 rolled out of the factory in March 2015. Italy has plans to order 60 F-35A and 15 F-35B 5th generation fighters.

F-15Es from the 4th Fighter Wing, 336th Fighter squadron, Seymour Johnson AFB along with F-16s from the 20th Fighter wing, 77th Fighter Squadron out of Shaw AFB worked with F-16s from the Turkish Air Force. The 6 Turkish AF F-16s that participated at Red Flag were from 132 Filo (Fighter Squadron) and 141 Filo (Fighter Squadron).

132 Filo operates F-16 Block 40/50 aircraft from the 3rd Main Jet Base at Konya. The Konya 3rd Main Jet Base Group Command was the base of NATO's AWACS aircraft during the Iraq war. Konya was a Turkish F-100 base in the mid-1970s. Air forces from Israel, Turkey, and the United States conducted their first joint exercises at the air base, code-named Anatolian Eagle, in June 2001. Konya hosts one of the country's most active naval bases, where hundreds of pilots undergo initial training in flying F-16 fighter jets.

141 Filo also operates F-16 Block 40/50 aircraft and was the first operational F-16 squadron in the Turkish Air Force in 1989. The first order of the Turkish military was for 160 F-16s build under Peace Onyx I. The first aircraft were built to block 30 standards. After airframe no. 43, the production shifted to block 40 versions. All aircraft delivered to 141 Filo

were rotated with 142 Filo so that the squadron could receive the newest block, with more advanced weapons at its disposal.

The F-16 replaced Turkey's F-104G Starfighters, like most European NATO countries. The primary mission of the squadron was air defense, with a secondary attack role. It did not change with the introduction of the F-16. It just replaced the F-104 with a newer one with more capabilities. They also provide a dedicated strike role with Nuclear weapons are stored at Incirlik AB. The squadron is relocated there in case of such an emergency.

The Turkish F-16s completed their long overseas trip to Nellis AFB with aerial refueling assistance from 2 KC-135Rs from 101ARS based at the 10th Tanker Base, Incirlik Turkey. The Turkish Air Force currently operates seven KC-135R aircraft.

During Red Flag 16-2 the U. S. Air Force and Turkish air force flew KC-135s together in formation for the first time in their histories. This took place on March 8, over the Nevada Test and Training Range northeast of Nellis Air Force Base, Nevada. A 350th Air Refueling Squadron instructor pilot flew with a Turkish KC-135 crew and a Turkish Air Force 101st Air Refueling Squadron commander flew with an American crew during the second week of Red Flag 16-2. The exchange during the exercise allowed both countries' tanker units to observe their differences and similarities in how their tanker crews perform their missions.

The Turkish Air Force is no stranger to participating in joint exercises. Every year, its air forces participate in numerous NATO, joint and bilateral exercises. Turkey itself is home to several exercises similar to Red Flag aimed at helping its own country build a more mature and capable force. However, Red Flag presents its own unique challenges.

U. S. Capt. Alex Durstein, 344th ARS pilot said: "The ability to interoperate air refueling operations with our Turkish allies showcases a dis-

tinct capability while demonstrating new methods of tanker employment. The lessons learned at Red Flag will help advance integration with our NATO partners and provide future coalition combatant commanders with increased operational flexibility. ”

Words and Phrases

extraordinary	特别的；非凡的
arena	竞技场；舞台
to depict	描画；描述
unprecedented	空前的；无前例的
Air Force Weapon School	（美国）空军武器学校
Thunderbirds	（美国空军）雷鸟飞行表演队
aggressor	挑衅者
to incorporate	包含；融入
Soviet tactics	苏联战术
session	周期
Air Expeditionary Force	空军远征航空队
to deploy	部署
cohesive	有结合力的；有凝聚力的
to suppress	压制；镇压
high-speed anti-radiation missile（HARM）	“哈姆”式导弹（高速反辐射导弹）
home in on	（靠信号、雷达等）导向目标追踪
to replicate	重复；复制
hand-held	手提式的；手执的
to succumb	不再抵抗；屈从

Unit 4 The USAF Fifth Generation Fighters
美国空军第五代战斗机

Warming-up Activities

Look at the picture and answer the following questions. You may discuss with your group-mates.

1. What are the typical features of fifth generation fighters?
2. Why is F-35 called JSF-lightening II? How many partner nations join in the development of Joint Strike Fighter program?
3. What are advantages of the F-22?

Focus 1 Brief Introduction to the Fifth Generation Fighters

Cultural Tips

Stealth Technology: Also termed LO technology (low observable technology)

It is a sub-discipline of military tactics and passive electronic countermeasures, which cover a range of techniques used with personnel, aircraft, ships, submarines, missiles and satellites to make them less visible (ideally invisible) to radar, infrared, sonar and other detection methods. It corresponds to camouflage for these parts of the electromagnetic spectrum.

1. *Watch Video Clip 1 and tell which features of the fifth generation fighters have been mentioned.*

_____

2. *Watch Video Clip 1 again and explain the following terms.*

Stealth	the ability of _____
Integrated avionics	the ability of _____ _____
Air dominance	the ability to _____ _____
Supercruise	_____ _____

3. *Watch Video Clip 1 again and answer the following questions.*

(1) What are the advantages of sensor fusion capability?

The _____ allow us to have _____, _____ around the aircraft. That _____, that _____, that _____ _____, that _____, we can send that information not only to _____, but also _____ that are actually marching into a fire fight.

(2) How do we change the way that the aircraft is maintained?

_____

_____

4. *Watch Video Clip 1 again and retell it with the help of the box below.*

Brief Introduction to the Fifth Generation Fighters	
Major components	Language patterns
• Stealth • Integrated avionics • Air dominance • Supercruise • Sensor fusion • Maintainability	1. … has the ability of … 2. … send information not only to …, but also to … 3. … go faster than 1.5 times the speed of sound.

Focus 2 Birth of the F-35

Cultural Tips

Strike Aircraft & Strike Fighter: "Strike aircraft" is an alternative term for a ground-attack aircraft. Whereas in current military parlance, a strike fighter is a multirole combat aircraft designed to operate primarily in the air-to-surface attack role while also incorporating certain performance characteristics of a fighter aircraft. As a category, it is distinct from fighter-bombers. Examples of contemporary American strike fighters are the McDonnell Douglas F-15E Strike Eagle, Boeing F/A-18E/F Super Hornet, and Lockheed Martin F-35 Lightning II.

1. *Watch Video Clip 2 and fill in the blanks.*

Developed jointly by America and Britain, the F-35 was driven by the desire to save _____. It was designed to simultaneously meet the needs of the U. S. _____, Navy and Marines as well as Britain's Royal _____ and Royal Air Force. The partner nations of the Joint Strike Fighter program include the UnitedStates, United Kingdom, _____, the Netherlands, Turkey, _____, Australia, Denmark and Norway. This is the shape of the future. It's an aircraft whose very shape is designed to deceive enemy _____ and it's an aircraft that has to perform three duties. It's a _____. It's a _____ and it's a _____ aircraft. This is the _____, the Lockheed Martin F-35 Lightning II.

2. *Watch Video Clip 2 again and then answer the following questions.*

(1) Why is the F-35 designed in three versions?

_____

_____

(2) Do you know why the F-35 is called the Joint Strike Fighter?

(3) How many partner nations join in the development of Joint Strike Fighter program?

(4) What are the three duties of the F-35?

(5) How is the F-35 officially named?

Focus 3 Three Versions of the F-35

1. *Watch Video Clip 3 and complete the chart.*

Model	Users	Features
A	_____	a conventional design
B	U. S. Marines & Britain's Royal Navy and the _____ _____	a _____ fan; a short take-off and _____ capability
C	_____	strengthened gear and a _____ for carrier operations

2. *Watch Video Clip 4 and complete the dialogue based on what you hear and your knowledge about F-35.*

A: Do you know why F-35 is called Joint Strike Fighter?

B: Because it is designed to _____.

A: Can one _____ be designed to satisfy so many different _____?

B: Yes. That's why F-35 represents a new concept.

A: What are the three _____ of the F-35?

B: They are CTOL, that is _____, STOL, that is _____

_____, and CV, that is _____.

3. *Watch Video Clip 5 and fill in the blanks about the functions of F-35 three versions.*

Now, all three _____ of the F-35, for the _____, _____ and _____, are being developed and further tested for mass production. The United States, Britain and their allies are expected to order more than _____ Joint Strike Fighters, which will replace most American-built _____ in use today.

"The size of scope of the JSF program is pretty significant, the airplane is being designed to replace the _____ and _____ for the Air Force, the _____ for the Marine Corps, and the _____ for the Navy."

Focus 4 Development of the F-22

1. *Watch Video Clip 6 and answer the following questions.*

(1) Which company was in charge of developing the F-22 Raptor?

_____

(2) When did the company begin to develop the F-22 Raptor?

_____

(3) Which plane was the F-22 designed to replace? And why?

_____

(4) What was the F-22 expected to do?

_____

2. *Watch Video Clip 6 again and fill in the table.*

	Advantages	Disadvantages
F-15		
F-117		

Continued

	Advantages	Disadvantages
F-22	_____ _____	_____ _____

Focus 5 Features of F-22

1. *Watch Video Clip 6 and tick True (T) or False (F).*

(1) Unlike F-117, the Raptor is very fast, reaching nearly twice the speed of sound. ( )

(2) F-22 has a secret engine advance called supercruise that maintain subsonic speed by using an afterburner. ( )

(3) The Raptor was built to actually maneuver at low altitude. ( )

(4) The Raptor has two powerful launchers. ( )

(5) The Raptor has a secret engine. ( )

(6) The Raptor has an actual maneuver altitude above 50,000 feet. ( )

2. *Watch Video Clip 7 and fill in the blanks.*

The Raptor is one last trick up its sleeve, (1) _____. Inspired by the Harrier Jump Jet, it can (2) _____ from it engines' up and down. It can take off (3) _____ or (4) _____, but the system radically improves its (5) _____. The (6) _____ _____ of the Raptor, cause an opportunity to make it turn a lot quicker and continue to be able to basically point your nose. In a regular type of a basic (7) _____ _____ he who gets its nose in the (8) _____ first wins the fight, so with this actual (9) _____ we can really turn the airplane and essentially (10) _____ it twice as better as other airplanes.

3. *Talk with your partner about features of F-22. You may refer to the*

following useful expressions.

Useful expressions

- ✧ *Unlike …, the Raptor is …*
- ✧ *It has … that produce …*
- ✧ *It also has …*
- ✧ *The Raptor was built to …*
- ✧ *Inspired by …, it can …*

Speech Platform

1. *Monologue*

Deliver a military briefing. Suppose you are an Air Force officer from Britain who is talking about Britain's acquisition of the F-35 and analyzing the features of F-35.

2. *Role play*

Situation: In Vandenberg Air Force Base, California, the instructor is going to introduce the features, advantages and capabilities of fifth generation fighter to the fresh pilots. The newcomers put forward many questions about fifth generation fighter, and the instructor gives explanation of fifth generation fighter and the development of the F-22.

Roles A: Steven—is the instructor who is going to make an introduction of fifth generation fighter and the development of the F-22.

Roles B: Jason, William, Paul—are the newcomers.

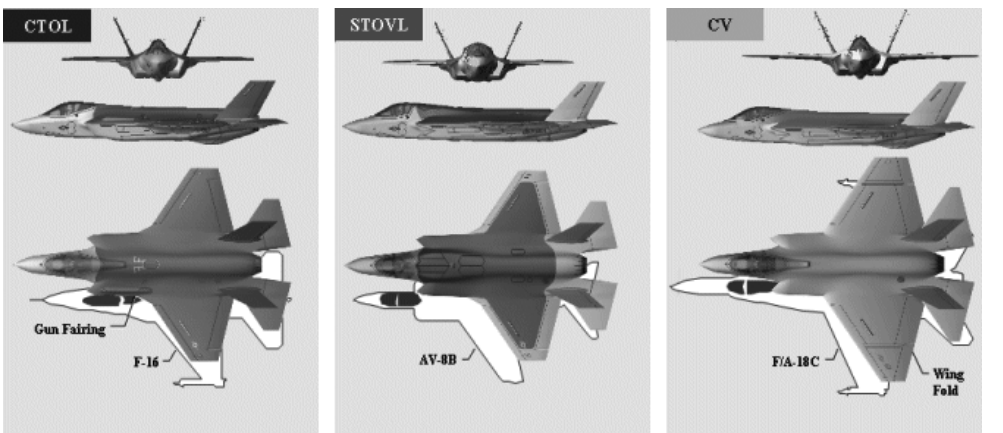
Reference Bank

1. JSF program

JSF is a joint, multinational acquisition program for the Air Force,

Navy, Marine Corps, and eight cooperative international partners. Expected to be the largest military aircraft procurement ever, the stealth, supersonic F-35 Joint Strike Fighter (F-35) will replace a wide range of aging fighter and strike aircraft for the U. S. Air Force, Navy, Marine Corps and allied defense forces worldwide. The program's hallmark is affordability achieved through a high degree of aircraft commonality among three variants: conventional takeoff/landing (CTOL), carrier variant (CV) and short takeoff/vertical landing (STOVL) aircraft.

Variation



The F-35 family tree branches into three distinct variants. The conventional takeoff and landing (CTOL) F-35A will replace F-16s and A-10s in the US Air Force. It will complement the F/A-22 Raptor air-dominance fighter.

F-35A. The F-35A for the U. S. Air Force matches or exceeds F-16 performance levels and goes several steps beyond with stealth, increased range on internal fuel, and advanced avionics. Operational effectiveness, supportability, and survivability are greatly enhanced as a result.

F-35B. The F-35B for the US Marine Corps and the UK Royal Air Force and Royal Navy, employs a short-takeoff/vertical-landing (STOVL)

capability. This takeoff and landing operation succeeds through a very innovative technology known as the shaft-driven lift fan propulsion system. Besides the propulsion system, the STOVL variant differs only slightly from the US Air Force variant.

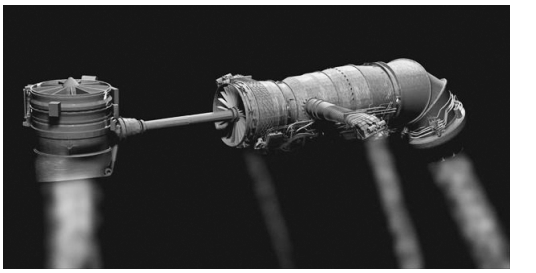
The short takeoff/vertical landing (STOVL) F-35B will replace the aging AV-8B Harrier STOVL attack jets (which have also proven increasingly difficult to support) of the US Marine Corps, as well as its F/A-18s.

F-35C. US Navy carrier operations account for most of the differences between the F-35C and the other JSF variants. The aircraft has larger wing and tail control surfaces to better manage low-speed carrier approaches. The F-35C has an increased-capacity structure for absorbing catapult launches and arrested landings. The F-35C carrier-based (CV) variant will complement the US Navy's F/A-18E/Fs and replace F-14s and earlier model F/A-18s.

The F-35C is the Navy's first stealth aircraft. The internal structure of the US Navy variant is strengthened to handle the loads associated with catapult launches and arrested landings. A larger wingspan provides increased range and improves low-speed handling characteristics for the Navy aircraft.

The F-35 is stealthy, enabling first-look, first-shot capability. It also has an internal laser designator and infrared sensors. Maneuverability characteristics are similar to those of the F-16, with comparable instantaneous and sustained "High-G" performance. Advanced stealth. Information fusion. Fighter agility. Unsurpassed situational awareness. New standards of reliability and maintainability. Network-enabled operations. Lethal, survivable, supportable and affordable—one of only two 5th Generation Fighters in the world. The F-35 is the only strike fighter that will be capable of simultaneously conducting air-to-air and air-to-ground combat missions with near impunity. A dramatic increase in survivability and lethality enables

the F-35 to accomplish its missions in the face of large numbers of sophisticated airborne and ground-based threats. With greatly increased reliability and ease of maintenance, the F-35 joins the world's only other 5th Generation Fighter, the F-22, in redefining what a fighter should be.



Lockheed Martin has developed a STOVL lift system that uses a vertically oriented Lift Fan. A two-stage low-pressure turbine on the engine delivers the horsepower to drive the STOVL Lift Fan. The Lift Fan generates a column of cool air that produces nearly 20, 000 pounds of lifting power using variable inlet guide vanes to modulate the airflow, along with an equivalent amount of thrust from the downward vectored rear exhaust to lift the aircraft. The Lift Fan has a clutch that engages for STOVL operations and a telescoping "D"-shaped hood to provide thrust deflection. Because the lift fan extracts power from the engine, exhaust temperatures are reduced by about 200 degrees compared to traditional STOVL systems.

Defining the 5th Generation Fighter

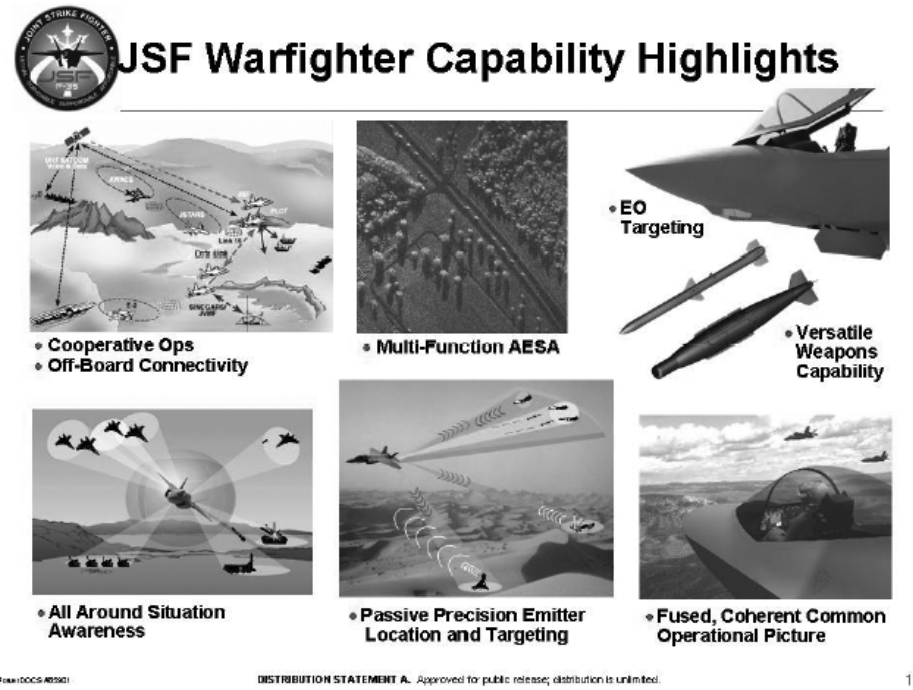
The F-35 calls for an entirely new way of thinking about fighter capabilities. By integrating a wealth of different capabilities, the fighter brings a quantum leap in lethality and survivability. It offers sharply enhanced expeditionary capability through a more reliable, more maintainable aircraft and robust airframe design. These attributes can only be realized through a design created from the ground up to develop the world's most capable multirole fighter.

Advanced Stealth

With embedded antennas, aligned edges, internally carried weapons and fuel and special coatings and materials, the F-35 uses stealth to pick and choose engagements while remaining virtually undetected by enemy

surface-to-air and air-to-air defense systems. The F-35's targeting flexibility allows the aircraft to find, fix, track, target, engage and assess targets in daytime, nighttime and all weather.

Sensor Fusion



Advanced integrated avionics processing data from a variety of on-board and net-enabled, off-board sensors provide the F-35 with true 5th Generation Fighter capabilities—a seamless real-world, real-time, 360-degree display of the battlespace. Equipped with detailed information that is prioritized to the situation at hand, the F-35 allows the pilot to be a tactician rather than a technician.

Joint Force Enabler

The F-35 is a key enabler for establishing future air dominance around the clock in any threat environment. Joint and coalition forces can attack any target, any time, with the freedom to operate anywhere on Day One of a conflict—even amid the most sophisticated and numerically superior threats. The F-35's persistence allows for excellent range and mission radius.

2. The F-22 Raptor

The F-22 program is developing the next-generation air superiority fighter for the United States Air Force to counter emerging worldwide threats. The F-22 Raptor is designed to ensure that America's armed forces retain air dominance. This means complete control of the airspace over an area of conflict, thereby allowing freedom to attack and freedom from attack at all times and places for the full spectrum of military operations. Air dominance provides the ability to defend forces from enemy attack and to attack adversary forces without hindrance from enemy aircraft.

The F-22 is designed to penetrate enemy airspace and achieve a first-look, first-kill capability against multiple targets. The F-22 is characterized by a low-observable, highly maneuverable airframe; advanced integrated avionics; and aerodynamic performance allowing supersonic cruise without afterburner. The F-22 is an air dominance fighter with much-improved capability over current Air Force aircraft. It is widely regarded as the most advanced fighter in the world, combining a revolutionary leap in technology and capability with reduced support requirements and maintenance costs.

The F-22's combination of stealth, integrated avionics, maneuverability and supercruise will give Raptor pilots a first-look, first-shot, first-kill capability against the aircraft of any potential enemy. The F-22 is designed to provide not just air superiority, but air dominance, winning quickly and decisively with few US casualties. The Raptor also has an inherent air-to-ground capability.

The F-22 will provide a first-look, first-shot, first-kill capability through the use of reduced observables and advanced sensors. To decrease the reaction time of enemy threats, increased supersonic cruise, and maneuverability goals have been set. The F-22's avionics suite is a highly integrated system maximizing performance to allow the pilot to concentrate on

the mission, rather than on managing the sensors as in current fighters. To improve operations from battle-damaged runways, the F-22 offers significantly reduced takeoff and landing distances, as compared to today's front-line fighters. A greatly increased combat radius, using internal fuel only, will give F-22 pilots the capability to engage the enemy over his territory and support long-range air-to-ground assets such as the F-15E. The F-22 will also bring a precision ground attack capability to the battlefield. In addition to greater lethality and survivability, the F-22 design calls for higher reliability, maintainability, and sortie generation rates than the aircraft it will replace. The design goal for all areas is a 100 percent improvement over the F-15 weapon system.

"Agility" is the ability of the F-22 pilot to point and shoot with his aircraft, pirouetting, and facing the enemy with his weapons at all speeds. The F-22 pilot can maintain control of the aircraft at speeds as low as that of a Piper Cub or at very high supersonic speeds. Because of the F-22's sophisticated aero-design and high thrust-to-weight ratio, it can easily outmaneuver all current and projected threat aircraft, both at medium and high altitudes.

"Supercruise" is the term given to the capability of sustaining supersonic speeds for long periods of time. Conventional fighters, while capable of supersonic flight, can only sustain these speeds for relatively short periods as the result of excessively high fuel consumption using afterburner. The F-22's engines produce more thrust than any current fighter engine, especially in military (non-afterburner) power. Called "supercruise", this characteristic allows the F-22 to efficiently cruise at supersonic airspeeds without using afterburners. The F-22's engine is expected to be the first to provide the ability to fly faster than the speed of sound for an extended period of time without the high fuel consumption characteristic of aircraft that use afterburners to achieve supersonic speeds. It is expected to provide

high performance and high fuel efficiency at slower speeds as well. This capability greatly expands the F-22's operating envelope in both speed and range over current fighters that must use afterburner to operate at supersonic speeds. The F-22 can cruise supersonically without afterburner and, therefore, can sustain these speeds for long periods. The enemy must react to any intruder and that reaction time to detect, aim weapons and launch, is severely reduced when the intruder is moving fast. At supercruise speeds, the F-22 (and its pilot) becomes less vulnerable to enemy missiles and aircraft simply because they cannot react fast enough.

Words and Phrases

to deceive enemy radars	骗过敌人的雷达
to perform three duties	执行三种任务
a short take-off	短距起飞
vertical landing (STOVL)	垂直起降
CTOL (conventional take-off and landing)	常规起降
CV (carrier variant)	舰载型
JSF (Joint Strike Fighter)	联合攻击战斗机
armed services	军种；部队
ground-attack bomber	对地攻击轰炸机
to maintain control of air space	保持制空权
to clear the way for all other forces	为其他部队扫清道路
to remove air and ground targets	清除空中和地面目标
advanced stealth	先进的隐身性
integrated avionics	综合航电
supportability and maintainability	可保障性和可维护性
air dominance	制空
situational awareness	态势感知

ISR（Information, Surveillance, Reconnaissance）	情报、监视和侦察
real time information	实时信息
surface-to-air missile	面对空导弹
Lockheed Martin	洛马公司
Pratt & Whitney	普惠公司
Sidewinder missile	“响尾蛇”导弹
tactical fighter	战术战斗机
air superiority fighter	空优战斗机
thrust vectoring	推力矢量
forward swept wing	前掠翼
air combat	空战
conventional weapons	常规武器
aerodynamics	空气动力学
afterburner	加力燃烧室
supercruise	超声速巡航

Unit 5　Surface to Air Missile Defense System
地空导弹系统

Warming-up Activities

Look at the picture and answer the following questions. You may discuss with your group-mates.

1. Speaking of surface to air missile defense system, what's your comment on its role in the modern warfare?

2. Discuss with you group-mates what you would talk about in introducing a surface to air missile defense system?

☐ radar　　☐ kill vehicle

☐ warhead　　☐ sensor

☐ launcher　　☐ missile

☐ armored personal carrier　☐ Others: _____

3. Can you match the words with their correct meaning?

(1) missile	a. the path followed by an object moving through space
(2) range	b. the quality of nearness to the truth or the true value
(3) trajectory	c. an action taken to offset another action
(4) countermeasure	d. rocket carrying passengers or instruments or a warhead
(5) accuracy	e. seize on its way
(6) intercept	f. an area in which something acts or operates or has power or control

Focus I Introduction to PAC-3 missile

Cultural Tips

PAC-3 Missile

In high-tech battlefield, surface to air defense system is of great importance in providing war fighter a reliable and lethal capability to defeat advanced threat. The "hit-to-kill" PAC-3missile is the world's most advanced, capable and powerful terminal air defense missile. It defeats the entire threat: tactical ballistic missiles carrying weapons of mass destruction, cruise missiles and aircraft. The PAC-3missile was selected as the primary inteceptor for multi-national Medium Extended Air Defense System (MEADS).

1. *Preview the following questions and watch Video Clip 1. Then answer the questions with as many details as you can.*

(1) What kind of missiles can the PAC-3 missile defend against in the presence of electronic countermeasures and rough terrain?

(2) What kind of improvements has PAC-3 made?

2. *Watch Video Clip 1 again and decide whether the statements are true or false. Fill in the brackets with T or F and correct the false statements.*

(1) PAC-3 stands for the Patriot Advantaged Capability missile. ( )

(2) PAC-3 has two war heads. ( )

(3) PAC-3 uses kinetic hit to kill technology to completely destroy air-borne targets. (　　)

3. *Watch Video Clip 2 carefully and try to answer the following questions.*

(1) When is the initial flight test of the PAC-3 missile against an incoming tactical ballistic missile reentry vehicle target?

(2) How's the performance of the PAC-3 missile?

(3) What are the exact missiles or air borne targets that the PAC-3 missile has intercepted?

4. *Watch Video Clip 2 again, find out the milestones in the PAC-3 missiles development and fill them in the table below.*

Time	*Program milestones*
May, 2002	
2004	

Focus 2 The Patriot System

Cultural Tips

The Patriot System

The new-production systems of the combat-proven Patriot Air and Missile Defense System include a complete technology refresh, obsolescence mitigation, improved man-machine interface and reduced life-cycle costs. The new systems further modernize Patriot's technologies, increase its affordability and enable future enhancements to continually improve air and missile defense capabilities.

1. *Watch Video Clip 3 carefully and try to answer the following questions.*

(1) What are the characteristics of the Patriot system?

(2) Facing with the complicated battlefield situation, what will AMD forces do?

(3) What are the sensors or radars mentioned to form an IBCS?

(4) What're the improvements of the radars?

2. *Watch Video Clip 3 again and decide whether the following statements about the patriot system are True or False. Fill in T or F and correct the false statements.*

(1) The patriot system is a robust air defense system that had shielded the war fighters and populations of the U. S. and other host nations for 30 years. (　　)

(2) All U. S. patriot fire units and all patriot partner nations are upgrading to Patriot Advanced Capability 3. (　　)

(3) The patriot system is currently in use in 12 nations besides the US. (　　)

(4) Raytheon's Patriot modernization moves today's weapon systems to an open network configuration that maintainssupremacy over future threats and reduces life cycle cost. (　　)

3. *Watch Video Clip 3 and try to fill in the blanks with the exact words you hear.*

As threats become more capable, AMD forces will (1) _____ _____individual weapons into a (2) _____network force. This composite battalion combines existing Patriot elements with JLENs and newly fielded its surface-launched AMRAAM. Each weapons unique capabilities and strength are leveraged into a sophisticated (3) _____ air and missile defense system of systems. Shortly, a 360 degree picture from netted and (4) _____ sensors such as Sentinel, Patriot, JLENS and other battle field radars will be processed by the new integrated battlefield (5) _____or IBCS. When the new lightweight Patriot (6) _____launcher is coupled with integrated fire control, AMD forces will engage all threats or that are 360 degrees to the kinematic range of all its weapons. The threat simply has nowhere to hide.

4. *Based on the information you note down, deliver a brief introduction about the Patriot system with the help of the strategy box.*

The missile consist of…
Its typical features include…
The main targets are…
It is firstly deployed in…

Strategy box

Choose the words that describe the Patriot system.

☐robust ☐tough ☐highly mobile
☐challenging ☐reliable ☐intense
☐effective ☐integrated ☐capable
☐trying ☐cost effective
☐ state of the art

Focus 3 The THAAD System

Cultural Tips

THAAD Weapon System

The THAAD weapon system is composed of four segments: missile, launcher, radar and BMC3I (battle management command, control, communication, and intelligence) centers and ground support equipment. The mission of the THAAD battery is to protect the force and selected geographical assets from the TBM attack. THAAD can conduct both endoatmosphere and exoatmosphere intercepts using hit-to-kill technology.

1. *Answer the following questions with your own words after watching Video Clip 4.*

(1) What are the systems involved in this test mission?

(2) What is the function of the Patriot system?

(3) What is the value of the data acquired from this test mission?

2. *Watch Video Clip 4 again and decide whether the following statements about the THAAD system are True or False. Fill in T or F and correct the false statements.*

(1) Test mission is that two THAAD interceptors were launched against two reentry vehicles separated from the threat representative target. ( )

(2) The second THAAD kill vehicle failed to acquire an intercepted piece of debris emanating from the first intercept. ( )

(3) In the pre-launch mission scenario, the launch and test supportive equipment preformed check out on both interceptors, verify the launch and test-supportive equipment to interceptors interface for electrical and message communications. ( )

(4) A threat representative separating target was launched from a launch center positioned offshore of Kauai in the Pacific Ocean. ( )

(5) The final phase of the flight test 10 was the code-conditioned interceptor 1 kill vehicle seeker tracking the reentry target, guiding the kill vehicle to the aim point on the target and destroy the reentry vehicle target with a kinetic hit to kill intercept. ( )

3. *The following descriptions are not in the correct time order. Please rearrange them to form a correct action sequence according to the video.*

A

A threat representative separating target was launched from a mobile launch platform positioned offshore of Kauai in the Pacific Ocean.

B

THAAD radar acquired and tracked the target vehicle.

C

THAAD fire control received critical target situational data from AEGIS.

D

The sophisticated software in the THAAD fire control system calculated an intercept plan for each of the interceptors to destroy the target.

E

The intercept plan was transmitted into the mission computer of each interceptor.

F

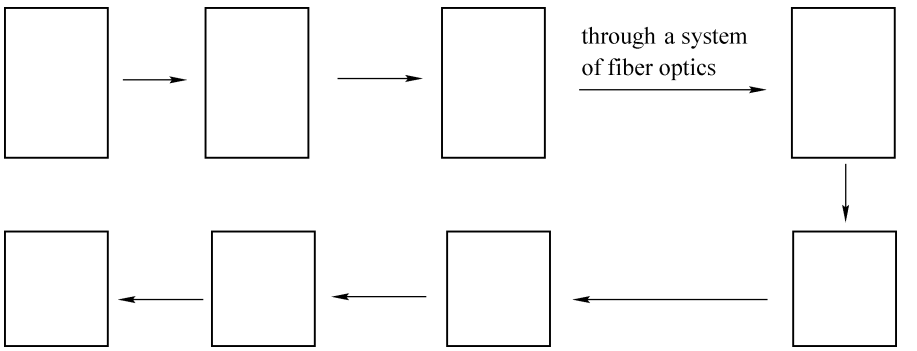
The radar systems send the target message inputs to fire control.

G

The launcher received launch commands, applied power and established communication with both interceptors and executed the tactical launch sequences for each interceptor.

H

Fire control then transmitted the intercept plan through fiber optics to the THAAD launcher.



Focus 4 The Integrated Missile Defense system

Cultural Tips

Raytheon Company

Raytheon Company is a technology and innovation leader specializing in defense, civil government and cybersecurity solutions. Founded in 1922, Raytheon provides state-of-the-art

electronics, mission systems integration, capabilities in C5I (command, control, communications, computing, cyber and intelligence), sensing, effects and mission support services. Raytheon is headquarted in Waltham, Massachusetts.

1. *Find out what do these acronyms stand for by your own knowledge or in Video Clip 5.*

AEGIS: _____

MKV: _____

MEADS: _____

PAC 3: _____

THAAD: _____

C2BMC: _____

2. *Watch Video Clip 5 and decide whether the following statements about the AEGIS system are True or False. Fill in the brackets with T or F and correct the false statements.*

(1) Destroying the enemy ballistic missile before it does is what cruise missile defense is all about. ( )

(2) AEGIS radar technology makes it possible to acquire and track hundreds of targets simultaneously. ( )

(3) MKV, the multiple kill vehicle, contains many small individual kill vehicles that are carried on a single booster and is in use. ( )

(4) MEADS, the medium extended air defense system is the only air defense system now able to roll off transports with the troops and immediately be ready to work. ( )

(5) THAAD, the terminal high altitude area defense system, is the only system that can destroy enemy missiles in both the endo-and exo-atmospheres. ( )

3. *Watch Video Clip 5 again and try to fill in the blanks with the exact*

words you hear.

Division	Name	characteristics	Weapon systems involved
First segment			
Second segment			
Third segment			

Speech Platform

1. *Role Play*

Divide into two groups with two members each, one group stands for China, the other stands for the US. You should start with a introduction of the features of the missiles of the same category, including their warhead, guidance system, attacking objects and so on. Then compare these missiles and discuss their weakness and strengths. Use the information given in the reference bank if needed.

2. *Critical Thinking*

After watching all the video above, please make a summary of US surface to air missile defense system and state your own understanding of the system, its predictable future, shortcomings and so on.

3. *Group Presentation*

You will be divided into groups and assigned to look for some information about the surface to air missile defense system in other countries and make in-class reports.

Reference Bank

1. The HongQi (Red Flag/Banner) 7 or HQ-7 (FM-80)

The HongQi (Red Flag/Banner) 7 or HQ-7 (FM-80) is a short-

range air defense missile. The missile is deployed on both ships and land-based vehicles. China revealed the export version, FM-80, in the 1989 Dubai Aerospace Show. Unit cost is around $ 162,000 per launcher and $ 24,500 per missile.

The HQ-7 SAM is used by PLA and PLAAF for short-range air-defense. At some PLAAF bases, the HQ-7 is deployed in hardened shelters. The PLA has mounted the HQ-7 on towed trailers.

A typical land-based HQ-7 battalion consists of:

- 3 x Operational Sections
- 1 x Support / Maintenance Section

Each Operational Section consists of:

- 1 x Search Unit with:
    - E/F-band Doppler Search Radar (18.4 km range)
    - Target processing unit, can process 30 targets & track 12targets simultaneously
    - Wired network to firing units
    - IFF & radio section
- 3 x Firing Units, each with:
    - Optical aiming system
    - 4 x 40 kW generators
    - 4-cel or 8-cel missile launcher
    - J-band tracking radar (17 km range)
    - TV tracking system (15 km range)
    - IR localiser
    - Target processing unit
    - Wired network
    - IFF & radio stations

Each Support/Maintenance Section consists of:

- 10 support vehicles

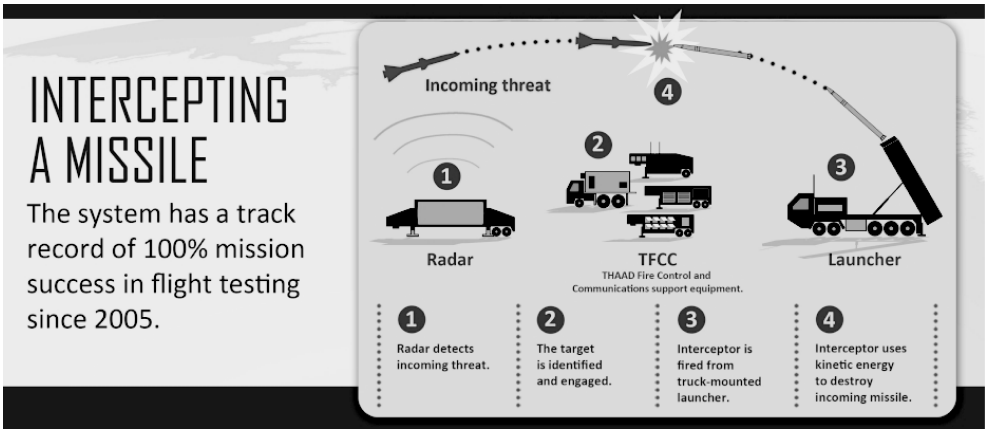
- Maintenance group

2. Terminal High Altitude Area Defense (THAAD)

Country: USA
Warhead: impact weapon
Range: 250 km
Basing: Land
In Service: Exp. 2008

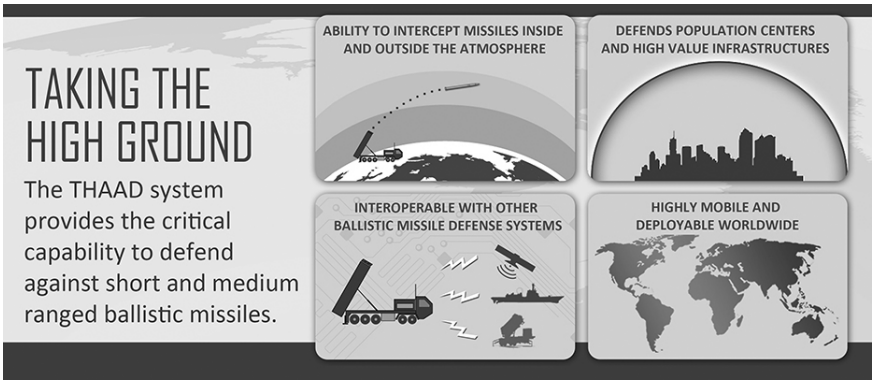
The Terminal High Altitude Area Defense (THAAD) system is a mobile, land-based weapons program designed to destroy short-and medium-range ballistic missiles in their terminal phases, just seconds before they explode over U. S. cities and military assets. One of the last lines of defense against weapons of mass destruction, THAAD will play a critical role in the Missile Defense Agency's Ballistic Missile Defense System.

Upon completion, THAAD will be able to intercept incoming missiles both inside and just outside of the Earth's atmosphere at a range of 200 kilometers. At such an altitude, it will be difficult for enemy missiles to launch decoys and countermeasures to fool the THAAD interceptor. In addition, THAAD will ensure the safe diffusion of any nuclear, chemical, or biological weapons, thus minimizing the risk of missile debris raining down on civilian or military populations.



The THAAD project, originally known as the Theater High Altitude Area Defense system, began in 1992 when the Missile Defense Agency awarded a $689 million development contract to Lockheed Martin and subcontractors Raytheon, Datatape, and EBCO. Initial successes were encouraging. In the late 1990s, however, THAAD missed six out of eight of its attempted intercepts, and many dismissed the project as an expensive failure. MDA decided to backtrack. Between 2000 and 2003, THAAD engineers reworked the entire system and fixed many of its inherent problems and redundancies.

In a typical combat scenario, THAAD's X-band, phased array, solid-state radar will scan the horizon for hostile missiles. It will be capable of detecting threats at a range of 1,000 kilometers. Once an incoming missile has been detected, the X-band radar will relay this information to the C2BMC unit, a mobile command center installed on Humvees that manages and integrates all THAAD components. C2BMC units are capable of linking THAAD with other missile defense layers to strengthen the overall Ballistic Missile Defense System. C2BMC is also responsible for determining friend from foe.



A typical THAAD battery will include nine M1075 truck-mounted launchers to transport and fire the interceptors. Each launcher is 12 meters long, 3.25 meters wide, and carries 10 missiles. The Army will be able

to transport the launchers by C-130 aircraft for rapid deployment. After firing, the launcher will take approximately 30 minutes to reload. The interceptor missile itself is 6.17 meters long, 0.34 meters in diameter, and weighs 900 kilograms. It is powered by a single stage solid fuel rocket motor with thrust vectoring. Although the interceptor is not designed to track long-range ballistic missiles, MDA has not yet ruled out the possibility of upgrading the system to accommodate greater range and velocity.

Following the launch, the interceptor will receive targeting information from the ground-based X-band radar. After its burnout stage, the interceptor's kill vehicle (KV) will separate from the booster. The KV is equipped with a liquid Divert and Attitude Control System (DAVS) which will maneuver the KV toward the target interception point. An infrared seeker in the KV's nose will home in on the target. At the point of impact, the KV will collide with the incoming missile (like a bullet hitting a bullet), causing complete destruction of the warhead including any nuclear, chemical, or biological agents.

3. HAWK missile

The Hawk is an all-weather, surface-to-air, medium-range/ medium-altitude missile system. Since its development in the 1960s, it has undergone several extensive upgrades. Its current major upgrade—the Phase III Hawk—provides increased firepower, enhanced reliability, improved maintenance, and integrated air defense capability through digital computers.

The Hawk system consists of six major components. Its Command Post performs critical command and control functions, including automatic data processing, friend or foe identification, and digital voice and data communications. Continuous Wave and Pulse Acquisition Radars provide low-to-medium-altitude target detection, while the High Power Illuminator tracks and illuminates targets. The Hawk missile performs the target kill

function, providing a formidable defense against fixed and rotary wing aircraft, cruise missiles, and short-range tactical ballistic missiles. The launchers, in addition to their missile aiming function, support prelaunch commands and transport the missiles in tactical situations.

The HAWK system has provided US forces with low to medium altitude air defense for the past forty years. The Hawk System has been the Marine Corp's primary air defense since the early 1960's. Basic HAWK was developed in the 1950s and initially fielded in 1960. The system has been upgraded through a series of product improvements beginning with the Improved HAWK in 1970. The Phase III product improvement and the latest missile modification were first fielded in the early 1990s to the US Army and US Marine Corps (USMC). The system has maintained it's effectiveness against succeeding generations of high technology aircraft through periodic preplanned product improvement programs. An evolving system, HAWK is now in its Phase III configuration with research and development underway to obtain a tactical missile defense capability.

Technical Data

Design

The Hawk system consists of a large number of component elements. These elements were typically fitted on wheeled trailers making the system semi-mobile. The Hawk missile is transported and launched from the M192 towed triple-missile launcher. A self propelled Hawk launcher, the SP-Hawk, was fielded in 1969, which simply mounted the launcher on a tracked M727 (modified M548), however the project was dropped and all activity terminated in August 1971.

Missile

The missile is propelled by a dual thrust motor, with a boost phase and a sustain phase. The MIM-23A missiles were fitted with an M22E8 motor which burns for 25 to 32 seconds. The MIM-23B and later missiles

are fitted with an M112 motor with a 5 second boost phase and a sustain phase of around 21 seconds. The M112 motor has greater thrust, thus increasing the engagement envelope. The Hawk missile has a slender cylindrical body and four long chord clipped delta-wings, extending from mid-body to the slightly tapered boat-tail. Each wing has a trailing-edge control surface. The MIM-23A has a minimum engagement range of 2 kilometers, a maximum range of 25km, a minimum engagement altitude of 60 meters, a maximum engagement altitude of 11,000 m and a warhead of 54 kg HE blast/fragmentation.

The MIM-23B has a minimum engagement range of 1.5 kilometers, a maximum range of 35km, a minimum engagement altitude of 60 meters, a maximum engagement altitude of 18,000 m and a warhead of 75 kg HE blast/fragmentation. Other improved missiles are also available as the MIM-23C, MIM-23D, MIM-23E/F, MIM-23G/H, MIM-23K/J and MIM-23L/M.

Radar and control systems

The latest version of Hawk Phase-III battery consists of:

One PAR Pulse Acquisition Radar AN/MPQ-50: The PAR is the primary source of high-to medium-altitude aircraft detection for the battery. The C-band frequency allows the radar to perform in an all-weather environment. The radar incorporates a digital MTI to provide sensitive target detection in high-clutter areas and a staggered pulse repetition rate to minimize the effects of blind speeds. The PAR also includes several ECCM features and uses off the air tuning of the transmitter. In the Phase III configuration the PAR is not modified.

One Continuous Wave Acquisition Radar (CWAR): This X Band Continuous wave system AN/MPQ-55 is used to detect targets. The unit comes mounted on its own mobile trailer. The unit acquires targets through 360 degrees of azimuth while providing target radial speed and raw range

data.

One HPIR High Power Illuminating Radar: The early AN/MPQ-46 High Power Illuminator (HPIR) radars had only the two large dish-type antennas side by side, one to transmit and one to receive. The HPIR automatically acquires and tracks designated targets in azimuth, elevation and range. It also serves as an interface unit supplying azimuth and elevation launch angles computed by the Automatic Data Processor (ADP) in the Information Coordination Centre (ICC) to the IBCC or the Improved Platoon Command Post (IPCP) for up to three launchers.

One ROR Range Only Radar: Pulse radar (AN/MPQ-37 or AN/MPQ-51 Phase II) that automatically comes into operation if the HPIR radar cannot determine the range, typically because of jamming. The ROR is difficult to jam because it operates only briefly during the engagement, and only in the presence of jamming.

BCC Battery Control Central: The BCC provides the facilities for the man/machine interface. The Tactical Control Officer (TCO) is in command of all the BCC operations and maintains tactical control over all engagement sequences. The TCO monitors all functions and has the authority and facilities to enable or pre-empt any engagement or change established priorities. The tactical control assistant assists the TCO in detection, identification, evaluation and co-ordination with higher commands. The tactical control console gives these two operators the necessary target and battery status information and controls required.

ICC Information Coordination Central: The ICC is the fire-control data processing and operational communications centre for the battery. It provides rapid and consistent reaction to critical targets. Automatic detection, threat ordering, the IFF (Identification Friend or Foe Transceiver) followed by automatic target assignment and launch functions are provided by the ICC. The ICC contains an ADP (Automatic Data Processor), IFF,

and battery terminal equipment and communications equipment. The ADP comprises an Electronic Data Processor (EDP) and a Data Take-Off unit (DTO). The DTO forms the interface between the other system equipment and EDP. With the exception of inputs from a solid-state reader and outputs to a printer, all communications with the ECP are through the DTO. The EDP is a militarized, general purpose digital computer especially adapted to this role.

Platoon Command Post PCP: The PCP is used as the fire-control centre and command post for the AFU (Assault Fire Unit). It can also be used to replace an ICC. The PCP provides manual and automatic target processing, IFF, intra-unit, intra-battery and army air defense command post communications and the displays and fire-control equipment for the three-man crew. It is essentially an ICC with tactical display and engagement control console, a central communications unit, status indicator panel and an automatic data processor. The tactical display and engagement control console provides the man/machine interface for the AFP (Assault Fire Platoon).

M192 Launcher unit (LCHR): LCHR supports up to three ready to fire missiles and is activated only on the initiation of the fire cycle. When the fire button is activated in the BCC or PCP, several launcher functions occur simultaneously: the launcher slew's to designated azimuth and elevation angles, power is supplied to activate the missile gyros, electronic and hydraulic systems, the launcher activates the missile motor and launches the missile. The launcher is equipped with electronic cut outs and sensing

circuits that allow firing in all emplacement situations.

Combat use

The Hawk system consists of seven major components. Its Information Coordination Central (ICC) and Battery Control Central (BCC) perform critical command and control functions, including automatic data processing, friend or foe identification, and digital voice and data communications. The Pulse Acquisition Radar (PAR) AN/MPQ-35 or AN/MPQ-50 (Hawk phase II), a search radar with a 20 rpm rotation, for high/medium altitude target detection. Continuous Wave and Pulse Acquisition Radars (CWAR) AN/MPQ-34 or AN/MPQ-55 (Hawk phase II) provide low-to-medium-altitude target detection, while the High Power Illuminator tracks and illuminates targets (HIPIR) AN/MPQ-33-39 or AN/MPQ-46 (Hawk phase I) or AN/MPQ-57 (Hawk Phase II) or AN/PQ-61 (Hawk phase III). The Hawk missile performs the target kill function, providing a formidable defense against fixed and rotary wing aircraft, cruise missiles, and short-range tactical ballistic missiles. The launchers, in addition to their missile aiming function, support pre-launch commands and transport the missiles in tactical situations.

A typical HAWK battery consists of 1 PAR Radar, 1 CWAR Radar, 2 HPIR radars, 1 ROR Radar, 1 ICC Information Coordination Central, one BCC Battery Control Central, one AFCC Assault Fire Command Console, one PCP Platoon Command Post, two launcher section controls and six M192 launcher units with 18 missiles.

Phase III HAWK battery consists of one PAR radar, one CWAR radar, 2 HIPIR radars, one FDC Fire Distribution Center, one IFF Identification Friend or Foe Transceiver, six DLN: Digital Launchers with 18 missiles.

4. Patriot Advanced Capability-3 (PAC-3)

Patriot Advanced Capability-3 (PAC-3) is a high/medium advanced

surface-to-air guided missile air defense system. The PAC-3 (Patriot Advanced Capability) is another upgrade of the Patriot air defense missile system. The previous PAC-2 was used during the Persian Gulf War to counter Iraqi Scud missiles. The PAC-2 was regarded as a successful anti-ballistic missile system. However its capabilities were not enough to intercept more advanced ballistic missiles. So the PAC-3 upgrade was developed by Raytheon with further improved capabilities against ballistic missiles. As a result nearly every aspect of the system was upgraded. The Patriot PAC-3 launchers are used by the US Army alongside the PAC-2 long-range air defense missile launchers. The PAC-3 anti-ballistic missile system has been exported to Germany, Japan, Kuwait and Netherlands.

The PAC-3 Program consists of two interrelated acquisition programs—The PAC-3 Growth Program and the PAC-3 Missile Program. The Growth program consists of integrated, complementary improvements that will be implemented by a series of phased, incrementally fielded material changes. The PAC-3 Missile program is a key component of the overall improvements of the Patriot system; it will provide essential increases in battlespace, accuracy, and kill potential.

PAC-3 is a much more capable derivative of the PAC-2/GEM system in terms of both coverage and lethality. The PAC-3 has a new interceptor missile with a different kill mechanism—rather than having an exploding warhead, it is a hit-to-kill system.

The PAC-3 missile is a smaller and highly efficient missile. It is a lot smaller than the previous Patriot missiles. The canister is approximately the same size as a PAC-2 canister but contains four missiles and tubes instead of a single round. Selected Patriot launching stations will be modified to accept PAC-3 canisters. Also the MIM-104F missile is more maneuverable. It destroys targets by ramming them. Yet still the missile has a small HE-FRAG warhead to enhance the kill probability. The MIM-104F missile

has a range of about 40km and can reach targets at an altitude of up to 20km.

Missiles are stored and launched from reinforced aluminum canisters at a fixed angle. Due to a smaller size four MIM-104M missiles are carried in a single container. So a single PAC-3 launcher has 16 missiles instead of 4. Launchers are mounted on a two-axle trailers or based on 8x8 high mobility chassis. The launcher unit is self-contained unit and has its own power plant and fuel. During operation the launchers, as well as the radar unit are unmanned. It takes 30 minutes to prepare the Patriot system for firing. A battery of launchers and associated support vehicles can change position up to several times a day.

The radar of the PAC-3 has increased detection and tracking ranges. It also has improved discrimination abilities. The radar can discriminate whether or not the aircraft is manned, or which of multiple re-entering ballistic objects are carrying ordnance. Also the software of the PAC-3 ensures that ballistic missiles with chemical warheads or with early release submunitions are destroyed at a certain altitude.

A Patriot battery or fire unit is a basic operating element. Normally it includes a command post, radar, 8 launchers and support vehicles.

Launchers can be located up to 1km from radar or command post vehicle. In order to establish effective and overlapping defenses batteries are located 30 ~ 40km between each other. A crane is used to reload the launchers with the missiles.

The PAC-3 Missile uses a solid propellant rocket motor, aerodynamic controls, attitude control motors (ACMs) and inertial guidance to navigate. The missile flies to an intercept point specified prior to launch by its ground-based fire solution computer, which is embedded in the engagement control station. Target trajectory data can be updated during missile flyout by means of a radio frequency uplink/downlink. Shortly before arrival at the intercept point, the PAC-3 Missile's on board Ka band seeker acquires the target, selects the optimal aim point and terminal guidance is initiated. The ACMs, which are small, short duration solid propellant rocket motors located in the missile forebody, fire explosively to refine the missile's course to assure body-to-body impact.

The Patriot PAC-3 is a part of three-layer missile defense network. The first line of defense comes from AEGIS missiles, designed to knock-out ballistic missiles in space. If that fails, ballistic missiles are intercepted by THAAD anti-ballistic missile system, just as they re-enter the atmosphere. The final layer of defense is the Patriot PAC-3 missile.

The PAC-3 system can defend against ballistic missiles of all types, however it is less effective against aircraft and air-to surface missiles. This is why it is deployed alongside the Patriot PAC-2 launchers with long-range missiles.

5. DF-21 Ballistic Missile (CSS-5)

The DF-21 (NATO code name: CSS-5) is a two-stage, solid-propellant, single-warhead medium-range ballistic missile (MRBM) system developed by China Changfeng Mechanics and Electronics Technology Academy (also known as 2nd Space Academy). The missile design is

based on the two-stage JL-1 submarine-launched ballistic missile (SLBM). The DF-21 is capable of delivering a 500kT nuclear warhead over a distance of 1,800km. The improved DF-21A was reportedly introduced in 1996.

In March 1967 the Commission of Science, Technology, and Industry for National Defense (COSTIND) decided to develop a land-based solid-propellant strategic ballistic missile. However, due to the impact of the Culture Revolution, the missile development did not start until August 1978.

In 1979 the solid-propellant ballistic missile design team, which was also in charge of the JL-1 submarine-launched ballistic missile (SLBM) development, was subordinated to 2nd Aerospace Academy, with Huang Wei-Lu appointed as the chief designer. The proposal to develop the DF-21 land-based medium-range ballistic missile (MRBM) based on the JL-1 SLBM design and technology was finally approved by the PLA in June 1980.

As well as the development of the ballistic missile, 2nd Aerospace Academy was also responsible for developing the transporter-erector-launcher (TEL) vehicle, missile canister, missile testing and aiming, and other launch and ground support systems. These systems had received rigid tests in various environment and weather conditions in 1984.

The first test launch of the DF-21 missile took place in May 1985, followed by a second test launch using modified ground support system in May 1987. The missile entered operational service in the late 1980s. In the mid-1990s, 2nd Aerospace Academy also introduced the improved DF-21A (CSS-5 Mod 2) with increased range and accuracy.

The DF-21 is a two-stage, solid-fuel, single-warhead medium-range ballistic missile system designed to provide target coverage in Asia and West Pacific regions. No detailed information is available regarding the missile's performance or design, but it is estimated that the DF-21 might be similar to the JL-1 SLBM in general aerodynamic layout. The missile might uses nozzle controls with no stabilizing fins.

The missile uses an inertial guidance, coupled to a terminal radar-guidance system to increase the accuracy. The missile's CEP is estimated to be about 300 ~ 400m. The missile carries a single 100kT, 200kT, or 500kT nuclear warhead, but can also configured to carry conventional HE warheads.

The missile is contained in an alumni-alloy cylinder launch-tube which keeps the missile in an invariable temperature environment. The launch tubes have an elevation range of 0 to 90 degrees. The azimuth range is from −180 to +180 degrees. The missile launch-tube is carried on a 3-axes semi-trailer TEL, which is towed by a HY473 6X6 tractor truck. The TEL trailer and tractor are equipped with hydraulically operated stabilizers which are lowered in preparation for the missile launch.

Words and Phrases

electronic countermeasure	电子反制；电子干扰
terrain	地形
kinetic	力学的
band	频率范围

agile	灵活的
coverage area	覆盖范围
mass attack	群体攻击
reentry vehicle	再入飞行器
to intercept	拦截
configurations	配置
trajectory	轨道
DT/OT	开发测试/操作测试
tactical targets	战术目标
Patriot Advanced Capability 3	爱国者导弹 3
battalions	部队
JLENS (Joint Land Attack Cruise Missile Defense Elevated Netted Sensor)	联合对地攻击巡航导弹防御用网络传感器系统
SLAMRAAM	地面发射型先进中距空空导弹系统
Sentinel	哨兵雷达
kinematic	运动学的
state-of-the-art	最先进的
configuration	配置
attacking aircraft	攻击机
altitude	高度
booster	助力器
detonation	爆炸
casing	外壳
shrapnel	炮弹碎片
self-propelled	自力推进的；机动式的
armored personal carrier	装甲运兵车
pulse acquisition radar	脉冲雷达

continuous wave acquisition radar	连续波雷达
target illuminating radar	目标照射雷达
range radar	测距雷达
the battery control center	控制中心
radar installation	雷达装置
bulk	体积
interdiction	封锁；拦截
debris	碎片；残骸
to emanate	发射；散发
AEGIS	宙斯盾系统
mission scenario	任务场景
interface	界面
synchronized	同步的；同步化的
crew drill	演习
infrared seeker	红外导引头
cryo	冷沉淀
kill vehicle	拦截器
interoperability	互操作性；互用性
ballistic missile	弹道导弹
endoatmospheric	大气层内的
exoatmospheric	大气层外的
airborne laser	空基高能激光武器
sensor	传感器
theater air defense missile	战区防空导弹
hit to kill technology	命中—摧毁技术
to engage	交战；交火；交手

Unit 6 Cyberspace
赛 博 空 间

Warming-up Activities

Look at the picture and answer the following questions. You may discuss with your group-mates.

1. How does Cyberspace influence our life and the world?
2. Cyber safety is increasingly not safe, then how to protect your own privacy?
3. What are the functions of cyberspace in modern battlefield?

Focus 1 Cyberspace 2025

Cultural Tips

Unlike most computer terms, "cyberspace" doesn't have a standard, objective definition. It is used to describe the virtual world of computers. Cyberspace is a domain characterized by the use of electronics and the electromagnetic spectrum to store, modify, and exchange data via networked systems and associated physical infrastructures. In effect, cyberspace can be thought of as the interconnection of human beings through computers and telecommunication, without regard to physical geography. William Gibson is sometimes credited with inventing or popularizing the term by using it in his novel of 1984, *Neuromancer*.

1. *Watch Video Clip 1 and fill in the blanks.*

(1) The growth of technology use tells _____

_____.

(2) And Microsoft, we understand that our ability to _____

_____ this future growth will be dictated by _____

_____, _____, and _____

make today.

2. *Watch Video Clip 1 again and find out the key information and numbers describing the growth of tech.*

Over the next ten years	_____ new internet users will come online reaching _____ users by _____.
	This growth will increase _____ _____ *more than* _____ *from* _____ _____ *to nearly* _____.
	Mobile internet subscriptions will increase more than _____ _____ *from* _____ *to* _____.

3. *Watch Video Clip 1 again and answer the following questions.*

(1) What does Microsoft want to do?

_____

(2) What are the three future scenarios developed by Microsoft? And what's your understanding of these three scenarios?

_____

_____

_____

Focus 2 Protecting Cyberspace

Cultural Tips

Cyberspace is composed of hundreds of thousands of interconnected computers, servers, routers, switches, and fiber optic cables that allow our critical infrastructures to work. Thus, the healthy functioning of cyberspace is essential to our economy and our national security.

1. *Watch Video Clip 2 and answer the questions.*

(1) What is the difference between the enemies in the general warfare and the cyberspace attack?

_____

(2) Why will the cyberspace be a premier battlefield domain?

_____

2. *Watch Video Clip 2 again and choose the right answer for the following questions.*

(1) Which of the following is not the reason why cyberspace has become a potential danger?

A. There is a wide use of cyberspace.

B. Cyber space is not safe itself.

C. Individuals have easy access to the cyberspace.

D. People become very dependent on the internet.

(2) Which one of the following examples is not mentioned to show that cyberspace is widely used?

A. Power system is controlled by computer system.

B. Water supply is managed by computer system.

C. Nuclear weapon is regulated by computer system.

D. Weapons can be purchased through the computer.

(3) Which is the best topic for this Video Clip?

A. Cyberspace—blessing or curse?

B. Cyberspace—the future premier battlefield

C. Cyberspace and modern war

D. The multi-function of cyberspace

3. *Discussion: What do you know about the term "cyber war" or "cyber warfare"? The class will be divided into two groups to debate on the benefits and potential dangers of cyberspace in military use. Organize your thoughts, write down the major points on the blackboard and briefly explain each point.*

Focus 3 Cyberspace Security

Cultural Tips

The claims of government-backed cyber attacks from China are a new argument of the "China threat" rhetoric that aims to contain the country. The "China threat" hype is also an instrument for the United States to make an online alliance with relevant countries to increase its own control over the Internet. Such intention is a display of a Cold War mentality stretching from conventional battlefields to cyberspace. Some countries are treating cyberspace as a new battlefield, justifying their efforts to build up their own cyber arsenals by making their own rules on how it should be treated. Tackling cyber attacks needs all countries to have a cooperative attitude instead of nations making groundless accusations.

1. *Watch Video Clip 3 and answer the questions.*

(1) What's the theme of the workshop?

_____

(2) What does China propose to do in this workshop?

_____

2. *Watch Video Clip 3 again and fill in the blanks.*

(1) The International Workshop on _____ has opened in Beijing. It is the _____ time for China and the U. N. to _____ such an event.

(2) Building cyberspace _____ as well as promoting an open, _____ and peaceful ICT environment, that is what this International Workshop on Cyber Security is all about.

(3) Cyberspace has brought various new _____. The digital divide among countries and regions is widening. _____ _____ and _____ or even _____ and _____ still exist.

3. *Watch Video Clip 3 again and take notes.*

Qian Hongshan, Assistant Foreign Minister:

_____

_____

_____

Long Zhou, Coordinator of Chinese Foreign Ministry:

_____

_____

_____

Kim Won-Soo, U. N. Under-Secretary-General:

_____

_____

_____

Speech Platform

1. *Group Discussion*

In Video Clip 1, three future scenarios are developed by Microsoft. You will have a group discussion on Which Scenario the Web in 2025 Will Be? And Why?

2. *Workshop*

The International Workshop on Cyber Security has opened in Xi'an. You will attend the workshop, give a speech, communicate and discuss with other experts.

3. *Presentation*

The Air Force Engineering University will hold a forum on the Role of PLAAF in the Cyberwar, you will attend the forum and make presentations on this theme. After the presentations, you will exchange your viewpoints and have further discussion.

Reference Bank

1. Cyberspace 2025

Predicting the future is not only difficult, it can also be dangerous. Make the wrong decision and the consequences can be devastating. Things are particularly tricky in the world of technology, but this has not stopped Microsoft from flipping forward a few years in the calendar to see just what the cyberspace of the future might look like. The Cyberspace 2025 report focuses largely on security, but also looks at the social, political, and technological factors that could influence the direction the cyberworld may travel in during the coming years.

Few would argue against the idea that technological advancements and increased connectivity have done wonders for the world. Communication is easier, information and education is now more accessible and cheaper than

ever, and business can be conducted faster than ever. But there have also been a number of downsides, such as security, cyber terrorism, and digital inequality.

The report predicts that by 2025, 91 percent of the developed world will be making use of the internet, compared to 69 percent of those in developing nations. The pace of change has been terrifying, as the problem of the digital divided is exacerbated by the fact that developing countries has less to invest in technology than developed economies, thereby—at least in theory—widening the gap between the two. The prediction is that growth in web use will be highest in emerging economies, but the worry is that demand with outstrip supply.

This is a problem recognized by *Cyberspace* 2025, as is the issue of the associated security risks with ever-more digital lives. The report points out that "the objectives and actions of governments, businesses, and societal organizations today will shape the progress of technology in the future. Their policies, programs, and investments can support or undermine ICT (Information and Communications Technology) development and global cybersecurity".

Governing an increasingly connected world is something that needs to be carefully managed, suggests the report. "Development of governance models that set clear policy direction and provide a cybersecurity framework for the country or region. Ideally, governance models should include commitments to an open, free Internet where privacy is protected; harmonization of laws and standards with international bodies and foreign governments; and supporting global free trade."

The future of cyberspace is simultaneously bleak and exciting. Nothing is yet set in stone as there are a huge number of variables that can be influenced right now and in the near future. *Cyberspace* 2025 makes for fascinating reading, and there is more to explore at the website *http://*

www. microsoft. com/security/cybersecurity/cyberspace 2025/.

2. Cyberspace Administration of China

The Cyberspace Administration of China (CAC) (国家互联网信息办公室), also known as the Office of the Central Leading Group for Cyberspace Affairs, is the central Internet censorship, oversight, and control agency for the People's Republic of China.

The CAC was founded in 2014, and is headed by Lu Wei, who was promoted from his previous position as Minister of State Internet Information Office. The CAC answers to the Central Leading Group for Internet Security and Informatization (中央网络安全和信息化领导小组), which is headed by Communist Party General Secretary Xi Jinping. The deputy heads are Li Keqiang, the Premier of the State Council of China, and Liu Yunshan, the head of the Propaganda and Ideology Leading Group.

Bureaucratic structure

The CAC, based on the same bureaucracy as the Communist Party's Office for Foreign Propaganda, is involved in the formulation and implementation of policy on a variety of issues related to the Chinese Internet.

The CAC includes the following departments: an Internet Security Emergency Command Center, an Agency Service Center, and an Illegal and Unhealthy Information Reporting Center.

The efforts of the CAC have been linked with a broader push by the administration of Party General Secretary Xi Jinping, characterized by Xiao Qiang, head of China Digital Times, as a "ferocious assault on civil society." This has included forced confessions of television journalists, military parades, harsh media censorship and more.

The CAC also maintains some censorship functions, including issuing directives to media companies in China. After a campaign to arrest almost 200 lawyers and activists in China, the CAC published a directive saying that "All websites must, without exception, use as the standard official

and authoritative media reports with regards to the detention of trouble-making lawyers by the relevant departments."

Lu Wei, the head of the CAC, was previously the head of the Beijing Propaganda Department, and oversaw the Internet Management Office, a "massive human effort" that involved over 60,000 Internet propaganda workers and two million others employed off-payroll. It was this experience that assisted General Secretary Xi Jinping in selecting Lu was the head of the newly formed Internet regulator, the CAC.

Policies

Among the areas the CAC regulates include usernames on the Chinese Internet, the appropriateness of remarks made online, virtual private networks, the content of Internet portals, and much more. The CAC was behind a warning given to the major web service Sina Weibo, which was threatened with closure unless it "improved censorship." The CAC said that Sina had failed to properly police the comments made by users on the Internet.

According to a draft Cyber Security Law, made public on July 6, 2015, the CAC works with other Chinese regulators to formulate a catalog of "key network equipment" and "specialized network security products" for certification. The CAC is also involved in reviewing the procurement of network products or services for national security considerations. Data stored outside of China by Chinese companies is also required to undergo CAC approval.

According to Xinhua, the official state newsagency, the CAC was responsible for issuing a "voluntary pledge" that was intended to be adhered to by the major Internet portals in China about the comments that would or would not be allowed to be made on their website. Among the categories of comments that were banned, included were those that "harmed national security," "harmed the nation's honor or interest," "damaged the nation's

religious policies," "spread rumors, disturbed public order," and "intentionally using character combinations to avoid censorship."

The CAC was also responsible for chasing down Internet users and web sites that published "rumors" following an explosion in the port city of Tianjin. Such rumors included claims that blasts killed 1,000 people, or that there was looting, or leadership ructions as a result of the blast.

3. U. S. Marine Corps Forces Cyberspace (MARFORCYBER)

The Secretary of Defense recognized the significance of the cyberspace domain to national security, and directed the establishment of U. S. Cyber Command (USCYBERCOM) as a sub-unified command under U. S. Strategic Command (USSTRATCOM). USCYBERCOM's primary objective is to plan, coordinate, integrate, synchronize and conduct activities to: direct the operations and defense of specified Department of Defense information networks and; prepare to, and when directed, conduct full spectrum military cyberspace operations in order to enable actions in all domains, ensure US/Allied freedom of action in cyberspace and deny the same to the adversary. In response, the Marine Corps established Marine Forces Cyber Command (MARFORCYBER) in October 2009 (this was complemented by the establishment of the Navy's U. S. Fleet Cyber Command (FLTCYBER), Army Cyber Command (ARCYBER), and Air Force Cyber Command (AFCYBER). MARFORCYBER's mission is to conduct full spectrum Cyberspace Operations; to include operating and defending the Marine Corps Enterprise Network (MCEN), conducting Defensive Cyberspace Operations (DCO), and when directed, conducting Offensive Cyberspace Operations (OCO) in support of Joint and Coalition Forces in order to enable freedom of action across all warfighting domains, and deny the same to adversarial forces.

MARFORCYBER Subordinate Units

MARINE CORPS NETWORK OPERATIONS AND SECURITY CEN-

TER (MCNOSC)

The MCNOSC's mission is to direct global Network Operations (NETOPS) and computer network defense of the MCEN and to provide technical leadership in support of Marine and Joint Forces operating worldwide. The MCNOSC is also responsible for intelligence gathering and analysis to develop future capabilities in support of DCO. The MCNOSC is the Computer Network Defense Service Provider (CNDSP) and serves as our Corps' Global Network Operations and Security Center (GNOSC). The MCNOSC provides 24/7 NETOPS C2 through its Operations Center. Under the OPCON of MARFORCYBER, the MCNOSC executes Information NETOPS and DCO in support of our operational requirements in order to enhance freedom of action across all warfighting domains while denying the efforts of adversaries to degrade or disrupt this advantage through cyberspace.

Key MCNOSC tasks include:

- operating and defending the MCEN
- collecting and sharing DODIN Situational Awareness
- reporting and directing actions that proactively address threats and vulnerabilities
- responding to operational incidents
- providing technical leadership to ensure our Corps and joint capabilities leverage new technologies to the advantage of the Marine warfighter

Marine Corps Cyberspace Warfare Group (MCCYWG)

Commander, MCCYWG organizes trains, equips, provides administrative support, manages readiness, and recommends certification and presentation of Cyber Mission Force (CMF) Teams to U. S. Cyber Command. The MCCYWG plans and conducts full spectrum cyberspace operations as directed by COMMARFORCYBER in support of service, combat-

ant command, joint, and coalition requirements.

Key MCCYWG tasks include:

- Conduct personnel management to organize and assign individuals to work roles and place them in work centers to ensure operational readiness of CMF Teams
- Ensure all personnel are trained in accordance with USCYBERCOM Joint Cyberspace Training and Certification Standards and equipped to perform all duties and tasks outlined in the MARFORCYBER Mission Essential Task List (METL)
- Plan for and, when authorized, conduct OCO including computer network exploitation (CNE), cyberspace intelligence, surveillance, and reconnaissance (ISR) and operational preparation of the environment (OPE)
- Plan and conduct designated DCO in response to threats against the MCEN, supported combatant command (COCOM) designated networks, and the Department of Defense Information Network (DODIN)
- Advise COMMARFORCYBER on force employment considerations
- Provide subject matter expertise for operational planning requirements

Words and Phrases

to dictate	控制；支配
plateau	平稳时期；稳定水平；停滞期
peak	巅峰期；高峰期
canyon	峡谷
to foster	促进
collaboration	合作；协作

innovation	创新；革新
to thrive	繁荣；茁壮成长
to derail	（使）脱轨；破坏；干扰
accessible	易接近的；可理解的
ICT	信息与通信技术
unilateral	片面的；单边的
technological monopoly	技术垄断
detrimental	有害的；不利的
infringement	侵权；违反；违背
intellectual property right	知识产权
ASEAN	东盟
BRICS	金砖五国（巴西、俄罗斯、印度、中国及南非）
governance	管理；统治；支配
U. N. undersecretary-general	联合国副秘书长
information infrastructure	信息基础设施

Unit 7 Peacekeeping Operations
维 和 行 动

Warming-up Activities

Look at the picture and answer the following questions. You may discuss with your group-mates.

1. What do you know about UN peacekeeping, such as its history, composition of peacekeeping forces, operations, impacts?
2. What qualities are needed by the Blue Helmets?
3. Are you willing to participate in peacekeeping activities and put your life in danger? And why?

Focus 1 China's Growing Role in UN Peacekeeping

Cultural Tips

China's Contribution to the UN Peacekeeping

China now plays an increasingly important role in providing public services in war-torn areas. Over 2,600 Chinese soldiers take part in UN peacekeeping missions. The international community has spoken highly of China's role in UN peacekeeping missions. EI Ghassim Wane, assistant Secretary General of UN peacekeeping operations, said, "China is in 10 of the 16 peacekeeping operations. They do make a huge contribution to our operations, performing in a very satisfactory manner efficiently and effectively. China also does contribute a number of assets that are critical to the success of peacekeeping, medical doctors of course."

1. *Watch Video Clip 1 and discuss how China has involved itself in the world peace and stability over the past twenty years? And what does it reflect?*

_____

_____

2. *Watch Video Clip 1 and match the time phrase in the left column with the event in the right.*

in 1990 a. The first batch of 15 police officers arrived in East Timor for a peacekeeping mission.

in 2000 b. A 125-member contingent of Chinese riot police arrived in Haiti to join the UN peacekeeping mission.

in 2004 c. China sent five military observers to the UN Truce Supervision Organization.

3. *Watch Video Clip 1 and fill in the form about Chinese peacekeepers.*

	Chinese troops on UN peacekeeping missions	Chinese police on UN peacekeeping missions
total number		
Nations or areas		
duties and tasks		

4. *Watch Video Clip 1 and fill in the blanks.*

By June 2007, Chinese peacekeepers had built _____ and _____, treated _____, transported _____, and cleared over _____, showing _____, _____ and _____ _____. The Chinese blue helmets follow _____ and _____. Their _____, together with _____, have won respect from both the UN and local people.

5. *Discuss and answer the question: What's the significance of Chinese expanding engagement in peacekeeping?*

Focus 2 Life Saving in Disasters

Cultural Tips

A Hand in Disaster, the Hope in Despair

In the catastrophic Haiti quake, a number of United Nations peacekeeping personnel participated in the joint rescue work. China dispatched a chartered plane to Haiti with emergency supplies and a 60-member rescue team the following day after the disastrous quake.

1. *Watch Video Clip 2 and answer the following questions.*

(1) Where did the Chinese peacekeepers in Haiti receive the letter from?

_____

_____

(2) How many kids are there in the orphanage? How about their ages?

_____

_____

(3) What happened to the orphanage?

_____

_____

2. *Watch Video Clip 2 again and fill the blanks.*

(1) Chinese peacekeepers' first reaction when received the letter was _____.

(2) When the peacekeepers returned, the team brought food and water, but keep _____.

(3) The peacekeepers bought _____ with their own money.

(4) The peacekeepers say it's their responsibility to _____ and _____ were the best reward.

Focus 3 Sacrifices in Peacekeeping Missions

Cultural Tips

Glorious Sacrifices

Since taking part in UN peacekeeping missions in 1990, a total of 17 Chinese peacekeepers have sacrificed their lives in action. Attacks, diseases and natural disasters are the factors behind their deaths. Two Chinese peacekeepers died in car accidents, and three from infectious diseases. Eight died during 2010's Haiti earthquake. And Four Chinese peacekeepers have died abroad in attacks targeting UN peacekeepers.

1. *Watch Video Clip 3 and tell what happened in the news.*

_____

2. *Watch Video Clip 3 again and fill in the blanks.*

The Chinese Foreign Ministry said _____ when _____ was hit by a bomb. According the South Sudanese Health Ministry _____ have been killed since late Thursday. That's when the clashes between _____ the president Salva Kiir and _____ the vice president Riek Machar began.

3. *Watch Video Clip 3 again and tell True (T) or False (F) about the response of Chinese Foreign Ministry and the embassy in South Sudan.*

(1) Took emergency measures to ensure the safety of Chinese organizations and citizens in South Sudan. ( )

(2) The Chinese Foreign Ministry has met government officials in

China. (　　)

(3) The Chinese embassy in South Sudan met South Sudanese ambassador. (　　)

(4) Asked them to take effective measures to protect Chinese citizens' life and property. (　　)

(5) Urged both sides to stop implementing the peace agreement. (　　)

Speech Platform

1. *Presentation*

Make a presentation on China's expanding peacekeeping role, including Chinese peacekeeping operations, deployments, financial contributions, constraints and the future.

2. *Press Conference*

The Chinese Foreign Ministry will hold a press conference to respond to the event that two Chinese peacekeepers have been killed and six others injured in a bomb attack during the clashes in the South Sudanese capital of Juba. The class will be divided into two groups, one the spokesman, and the other the journalists.

3. *Discussion*

Sexual-abuse scandal conducted by UN peace keepers is eroding UN credibility in peacekeeping. The class will have a discussion on how to solve this issue and enhance the credibility of UN.

Reference Bank

1. UN Peacekeeping

Peacekeeping refers to activities that tend to create conditions that favor lasting peace. Within the United Nations (UN) group of nation-state governments and organizations, there is a general understanding that at the

international level, peacekeepers monitor and observe peace processes in post-conflict areas, and may assist ex-combatants in implementing peace agreement commitments that they have undertaken. Such assistance may come in many forms, including confidence-building measures, power-sharing arrangements, electoral support, strengthening the rule of law, and economic and social development. Accordingly, the UN peacekeepers (often referred to as Blue Berets or Blue Helmets because of their light blue berets or helmets) can include soldiers, police officers, and civilian personnel.

The United Nations is not the only organization to implement peacekeeping missions. Non-UN peacekeeping forces include the NATO mission in Kosovo (with United Nations authorization) and the Multinational Force and Observers on the Sinai Peninsula or the ones organized by the European Union like EUFOR RCA (with UN authorization). The Nonviolent Peaceforce is one NGO widely considered to have expertise in general peacemaking by non-governmental volunteers or activists.

United Nations Peacekeeping Missions

There are a range of various types of operations encompassed in peacekeeping. Importantly, these types of missions and how they are conducted are heavily influenced by the mandate in which they are authorized.

Observation Missions which consist of small contingents of military or civilian observers tasked with monitoring cease-fires, troop withdrawals, or other conditions outlined in a ceasefire agreement. They are typically unarmed and are primarily tasked with observing and reporting on what is taking place. Thus, they do not possess the capability or mandate to intervene should either side renege on the agreement. Examples of observation missions include UNAVEM II in Angola in 1991 and MINURSO in the Western Sahara.

Interpositional Missions, also known as traditional peacekeeping, are

larger contingents of lightly armed troops meant to serve as a buffer between belligerent factions in the aftermath of a conflict. Thus, they serve as a buffer zone between the two sides and can monitor and report on the compliance of either side with regard to parameters established in a given ceasefire agreement. Examples include UNAVEM III in Angola in 1994, and MINUGUA in Guatemala in 1996.

Multidimensional missions are carried out by military and police personnel in which they attempt to implement robust and comprehensive settlements. Not only do they act as observers, or in an interpositional role, but they also participate in more multidimensional tasks—such as electoral supervision, police and security forces reform, institution building, economic development and more. Examples include UNTAG in Namibia, ONUSAL in El Salvador, and ONUMOZ in Mozambique.

Peace enforcement Missions are Chapter VII missions and unlike the previous Chapter VI missions, they do not require the consent of the belligerent parties. These are multidimensional operations comprising both civilian and military personnel. The military force is substantial in size and fairly well-equipped by UN Peacekeeping standards. They are mandated to use force for purposes beyond just self-defense. Examples include ECOMOG and UNAMSIL in West Africa and Sierra Leone in 1999, as well as the NATO operations in Bosnia—IFOR and SFOR.

Broader Aims of UN Missions

The UN Peacekeeping Operations are summarized as preventative diplomacy, confidence-building measures such as fact-finding missions, observer mandates, and the potential deployment of UN mandated forces in order to diminish the potential for violence or the danger of violence occurring and thus increasing the prospect for lasting peace.

Peace-enforcement, meant to act with or without the consent of the belligerents in order to ensure any treaty or cease-fire mandated by the

United Nations Security Council is maintained. This is done primarily under the auspices of Chapter VII of the UN Charter and the forces are generally heavily armed as opposed to the unarmed, or lightly-armed personnel frequently deployed as observers.

Peace-making, meant to compel belligerents to seek a peaceful settlement for their differences via mediation and other forms of negotiation provided by the UN under the auspices of Chapter VI of the UN Charter.

Peace-keeping, deployment of a lightly-armed United Nations presence in the field with the consent of the belligerents involved in order to build confidence and monitor any agreements between concerned parties. Additionally, diplomats would continue to work toward comprehensive and lasting peace, or for the implementation of an agreed upon peace.

Post-Conflict Reconstruction, intended to develop economic and social cooperation meant to mend relations between the belligerents. Social, political, and economic infrastructure would ideally prevent potential violence and conflict in the future and help to contribute to a lasting and robust peace.

Brief history of United Nations Peacekeeping

United Nations Peacekeeping started in 1948 when the United Nations Security Council authorized the deployment of UN unarmed military observers to the Middle East in order to monitor the armistice agreement that was signed between Israel and its Arab neighbors in the wake of the Arab-Israeli War. This operation was called the United Nations Truce Supervision Organization (UNTSO) and is still in operation today. With the passage of resolution 73 (1949) by the Security Council in August 1949, UNTSO was given the task of fulfilling four Armistice Agreements between the state of Israel and the Arab states which had participated in the war. Thus, UNTSO's operations were spread through five states in the region—Israel, Egypt, Jordan, Lebanon and the Syrian Arab Republic.

Nations' Participation in Peacekeeping Missions

The United Nations Charter stipulates that to assist in maintaining peace

and security around the world, all member states of the UN should make available to the Security Council necessary armed forces and facilities. Since 1948, about 130 nations have contributed military and civilian police personnel to peace operations. While detailed records of all personnel who have served in peacekeeping missions since 1948 are not available, it is estimated that up to one million soldiers, police officers and civilians have served under the UN flag in the last 56 years.

As of March 2008, in addition to military and police personnel, 5,187 international civilian personnel, 2,031 UN Volunteers, and 12,036 local civilian personnel worked in UN peacekeeping missions. As of 30 June 2014, 3,243 people from over 100 countries have been killed while serving on peacekeeping missions.

Developing nations tend to participate in peacekeeping more than developed countries. This may be due in part because forces from smaller countries avoid evoking thoughts of imperialism. For example, in December 2005, Eritrea expelled all American, Russian, European, and Canadian personnel from the peacekeeping mission on their border with Ethiopia. Additionally, an economic motive appeals to the developing countries. The rate of reimbursement by the UN for troop contributing countries per peacekeeper per month include: $1,028 for pay and allowances; $303 supplementary pay for specialists; $68 for personal clothing, gear and equipment; and $5 for personal weaponry. This can be a significant source of revenue for a developing country. By providing important training and equipment for the soldiers as well as salaries, UN peacekeeping missions allow them to maintain larger armies than they otherwise could. About 4.5% of the troops and civilian police deployed in UN peacekeeping missions come from the European Union and less than one percent from the United States.

Women's Participation in Peacekeeping

Security Council Resolution 1325 was the first major step taken by the

UN to include women as active and equal actors in "the prevention and resolution of conflicts, peace negotiations, peace-building, peacekeeping, humanitarian response and in post-conflict reconstruction and stresses the importance of their equal participation and full involvement in all efforts for the maintenance and promotion of peace and security".

As of July 2016, women serve in every UN peacekeeping mission either as troops, police, or civilian staff. In 1993, women made up 1% of deployed uniformed personnel. In 2014, out of approximately 125,000 peacekeepers, women constitute 3% of military personnel and 10% of police personnel in UN Peacekeeping missions, as well as 29% of international and 17% of national staff in peacekeeping and special political missions. In 2016, five women were leading peacekeeping missions as Special Representatives of the Secretary-General.

Factors that Impact Lasting Peace

There are many factors that can have a negative impact on lasting peace such as hidden information about the relative strength possessed by the belligerents; a rebel group's involvement in illicit financing through means such as through the export of diamonds and other minerals; participation in the trafficking of drugs, weapons and human beings; whether or not military victory was achieved by one side; the length of the war as well as how costly it was; commitment problems and security dilemma spirals experienced by both sides; whether a cease-fire or treaty signed by the belligerents; lack of transparency in the motives and actions carried out by belligerents in the immediate aftermath of the conflict; extremist spoilers; participants in the conflict that may benefit from its continuation; indivisibility and more.

Impacts of Peacekeeping on Participating Forces

Some commentators have highlighted the potential to leverage peacekeeping operations as a mechanism for advancing military normalization.

Michael Edward Walsh and Jeremy Taylor have argued that Japan's peacekeeping operations in South Sudan provide those promoting Japan's military normalization with "a unique opportunity to further erode the country's pacifist constitution." "Unable to accept the full weight of modern peacekeeping operations without fundamental political, legal, and social changes," they conclude that "Japan's peacekeepers remain ill prepared to tackle many serious contingencies requiring use of deadly force." For this reason, they suggest that Japan's continued participation in UN peacekeeping operations might force policy changes that ultimately push the country toward "a tipping point from which the normalization of Japan's military (will be) the only outcome."

Another viewpoint raises the problem that the peacekeeping may soften the troops and erode their combat ability, as the mission profile of a peacekeeping contingent is totally different from the profile of a unit fighting an all-out war.

Impacts on individual peacekeepers

Studies of peacekeeping soldiers show both positive and negative effects. A study of 951 US Army soldiers assigned to Bosnia revealed that 77% reported some positive consequences, 63% reported a negative consequence, and 47% reported both. The peacekeepers are exposed to danger caused by the warring parties and often in an unfamiliar climate. This gives rise to different mental health problems, suicide, and substance abuse as shown by the percentage of former peacekeepers with those problems. Having a parent in a mission abroad for an extended period is also stressful to the peacekeepers' families.

Criticism

Since the 1990s, UN Peacekeepers have been the subject of numerous accusations of abuse ranging from rape and sexual assault, to pedophilia and human trafficking. Complaints have arisen from Cambodia, East Timor

and West Africa. In Bosnia-Herzegovina prostitution associated with trafficked women skyrocketed and often operated just beyond the gates of U. N. compounds. David Lamb, a regional human rights officer in Bosnia from 2000 to 2001 claimed "The sex slave trade in Bosnia largely exists because of the U. N. peacekeeping operation. Without the peacekeeping presence, there would have been little or no forced prostitution in Bosnia." In addition, hearing held by the U. S. House of Representatives in 2002 found that members of SFOR were frequenting Bosnian brothels and engaging in sex with trafficked women and underage girls.

Cultural Concerns Related to Contemporary Peacekeeping

There is a notable intermingling of varied cultures when it comes to peacekeeping. From the vast number of troops, police and personnel that are brought together from various contributing countries to the oftentimes challenging ethnic regions which peacekeeping forces are often deployed. Because of these varied cultures, complicated cultural interactions take place which not only affect mission effectiveness, but can also lead to friction with the population the peacekeepers are meant to be assisting.

Thus, UN Peacekeeping deployments must not only contend with language complications, but also myriad cultural and social differences that can create operational difficulties that are hard to overcome. These difference can create problems with regard to interactions (whether personal or between institutions/units), misunderstandings, inadvertent offensive behavior and prejudices that may be associated with a particular contingent from a given country.

2. UN Standards of Conduct

Ten Rules: Code of Personal Conduct for Blue Helmets

Since 1998, uniformed personnel have been provided with pocket cards of the Ten Rules: Code of Personal Conduct for Blue Helmets.

(1) Dress, think, talk, act and behave in a manner befitting the dig-

nity of a disciplined, caring, considerate, mature, respected and trusted soldier, displaying the highest integrity and impartiality. Have pride in your position as a peace-keeper and do not abuse or misuse your authority.

(2) Respect the law of the land of the host country, their local culture, traditions, customs and practices.

(3) Treat the inhabitants of the host country with respect, courtesy and consideration. You are there as a guest to help them and in so doing will be welcomed with admiration. Neither solicit nor accept any material reward, honor or gift.

(4) Do not indulge in immoral acts of sexual, physical or psychological abuse or exploitation of the local population or United Nations staff, especially women and children.

(5) Respect and regard the human rights of all. Support and aid the infirm, sick and weak. Do not act in revenge or with malice, in particular when dealing with prisoners, detainees or people in your custody.

(6) Properly care for and account for all United Nations money, vehicles, equipment and property assigned to you and do not trade or barter with them to seek personal benefits.

(7) Show military courtesy and pay appropriate compliments to all members of the mission, including other United Nations contingents regardless of their creed, gender, rank or origin.

(8) Show respect for and promote the environment, including the flora and fauna, of the host country.

(9) Do not engage in excessive consumption of alcohol or any consumption or trafficking of drugs.

(10) Exercise the utmost discretion in handling confidential information and matters of official business which can put lives into danger or soil the image of the United Nations.

Words and Phrases

volunteer military personnel	志愿军事人员
be dispatched	被派遣
resolutions of the UN Security Council or its General Assembly	联合国安理会的决议
UN Charter	联合国宪章
international conflicts	国际冲突
diplomatic means or coercive measures	外交途径或强制性措施
to embargo	禁运
economic sanctions	经济制裁
sending in UN troops	派驻联合国部队
to supervise and help maintain ceasefires	监督并协助维持停火
to assist in troop withdrawals	帮助部队撤离
to provide a buffer between opposing forces	在对抗部队之间构成缓冲
on a voluntary basis	在自愿的基础上
internal affairs	内政
to favor one party against another	袒护一方
military observer missions	军事观察员任务
peace-keeping forces	维和部队
light defensive weapons	轻型防御性武器
self-defense	自卫
UN general secretary	联合国秘书长
authorized by Security Council	经安理会批准
regional organizations	区域性组织
rescue team	救援队
rescue operation	救援活动
first aid	急救
urgent appeal	紧急呼吁

to come/go to one's rescue	前来/去救援
China International Search and Rescue Team	中国国际救援队
International Society	国际社会
medical staff	医务工作者
post-quake epidemics	震后瘟疫
to reconstruct homeland	重建家园
massive rescue mission	大规模救援任务
strenuous efforts	极大的努力
humanitarian aid	人道主义援助

Unit 8 New Military Strategy
新军事战略

Warming-up Activities

Look at the picture and answer the following questions. You may discuss with your group-mates.

1. Discuss with your group-mates which principles you will take into consideration when develop a military strategy.

   □ defense expenditure □ the armed forces

   □ national defense policy □ the security situation

   □ reform and development □ Others: _____

2. Can you match the words with their correct meaning?

   (1) electronic warfare □ a. war between belligerents whose relative military power, strategy or tactics differs significantly.

   (2) information warfare □ b. a war or an action involving the use of the electromagnetic spectrum.

   (3) asymmetric warfare □ c. the spreading of propaganda of disinformation to demoralize or manipulate the enemy and the public.

Focus 1 Remarks by Obama on the Defense Strategic Review

Cultural Tips

Definition of military strategy: Military strategy is a set of ideas implemented by military organizations to pursue desired strategic goals. Military strategy deals with the planning and conduct of campaigns, the movement and disposition of forces, and the deception of the enemy.

1. *Watch Video Clip 1 and answer the question: according to President Obama, what is the purpose of the comprehensive defense review?*

_____.

2. *Watch Video Clip 1 again and decide whether the statements are True or False and correct the false statements.*

(1) It is the President's duty to draft the Military Strategy. (　　)

(2) Budget reductions will cover every region and army service. (　　)

(3) President Obama announced that the U. S. military will switch to a new strategy focused on the Middle East region. (　　)

(4) The President outlined a vision for the future that would ensure an uncompromised U. S. military operating with less money and smaller air forces. (　　)

(5) The President promised that the U. S. will remain the world's pre-eminent military power. (　　)

(6) The President ensured those who wear the uniform of the United States receive the care and the benefits they've earned. (　　)

3. *Watch Video Clip 1 again. Take notes and fill the blanks.*

According to the strategy, what kind of military will the United States need long after the wars of the last decade are over?

Partnership	We will be strengthening _____. We're going to continue _____, including _____, which has demonstrated time again that it's a force multiplier.
National security	We'll be able to ensure our security with _____. We'll continue to get rid of _____ so that we can invest in the capabilities that we need for the future, including _____ _____ _____.
Veteran benefits	We're going to keep faith with those who serve, by making sure _____ _____, and by _____. We'll keep working to give our veterans _____, _____, and _____ that they deserve and that they have earned.

4. *Suppose you were invited to introduce the Military Strategy of the US. Try to deliver a presentation by covering all the information you've learned in the video.*

Strategy box

Which aspects should you include in your presentation?

- ☐ the purpose of the strategy
- ☐ recall of the history
- ☐ the well-being of the warriors
- ☐ the new focus
- ☐ the drafters
- ☐ the security of the country

Focus 2 Significant Changes for the Future U. S Force.

Cultural Tips

Difference between strategy and tactics: Strategy differs from tactics, in that strategy refers to the employment of all of a nation's military capabilities through high level and long term planning, development and procurement to guarantee security or victory.

1. *Watch Video Clip 2 and answer the question.*

What significant changes will the U. S. force for the future involve?

First, the force for the future:

Second, global posture and presence:

Third, alliances and partnership:

2. *Watch Video Clip 2 again. Take notes and complete the gap-filling task.*

U. S future global posture and presence in different regions

Asia-Pacific:

Middle East: _____

Europe: _____

Latin America, Africa: _____

3. *Discuss with your partner about what the future force would be like. You may find some clues in Video Clip 2.*

Strategy box

Choose the adjectives that describe the future U. S. joint force.

☐ smaller ☐ agile ☐ ready

☐ innovative ☐ leaner ☐ flexible

☐ technologically advanced

Focus 3 Building of A Global Force

Cultural Tips

Definition of tactics: Tactics is the military science employed to secure objectives defined as part of the military strategy; especially the methods whereby men, equipment, aircraft, ships and weapons are employed and directed against an enemy.

1. *Watch Video Clip 3. Mark your own opinions on these issues, and make notes of your reasons.*

(1) The U. S. will follow the Cold-War era requirement that the military be able to fight two wars simultaneously.

☐ Yes ☐ No Reasons _____

(2) The U. S. should build flexible and adaptable forces that can respond quickly and effectively to a variety of contingencies and potential adversaries.

☐ Yes ☐ No Reasons _____

(3) The shift away from Iraq and Afghanistan means there will be less of a need to maintain the increased number of Army soldiers and Marines required to conduct a counterinsurgency fight.

☐ Yes ☐ No Reasons _____

2. *The U. S. government plans to reduce the overall defense budget. Under this condition, how can the ground forces surge, regenerate and mobilize capabilities needed for any contingency? Watch Video Clip 3 again and complete the blank-filling task.*

(1) _____ will be the key.

(2) That means re-examining _____.

(3) It means maintaining _____.

(4) It means retaining _____ and preserving _____.

Speech Platform

1. *Group Discussion*

Discuss with your partner about the following questions: What's new in President Obama's military strategy? And what's your understanding of the new military strategy?

2. *Critical Thinking*

In Video Clip 3, Leon E. Panetta said "Our strategy review concluded that the United States must have the capability to fight several conflicts at the same time. …How we defeat the enemy may very well vary across conflicts" and the U. S. will reduce the size of the nation's military.

Please try to figure out how the U. S. will "confront and defeat more

than one adversary at a time" in the face of downsizing of the forces and looming defense budget cuts.

3. *Symposium*

The PLA Academy of Military Science will hold a day-long symposium on "National Security: What Does It Mean for China When the U. S. Shift the Focus of Its Military in Asia-Pacific". You will attend this symposium, please prepare your speech and discuss it with other participants.

Reference Bank

1. Introduction of Defense Strategic Guidance

The United States has played a leading role in transforming the international system over the past sixty-five years. Working with like-minded nations, the United States has created a safer, more stable, and more prosperous world for the American people, our allies, and our partners around the globe than existed prior to World War II. Over the last decade, we have undertaken extended operations in Iraq and Afghanistan to bring stability to those countries and secure our interests. As we responsibly draw down from these two operations, take steps to protect our nation's economic vitality, and protect our interests in a world of accelerating change, we face an inflection point. This merited an assessment of the U. S. defense strategy in light of the changing geopolitical environment and our changing fiscal circumstances. This assessment reflects the President's strategic direction to the Department and was deeply informed by the Department's civilian and military leadership, including the Joint Chiefs of Staff, the Secretaries of the Military Departments, and the Combatant Commanders. Out of the assessment we developed a defense strategy that transitions our Defense enterprise from an emphasis on today's wars to preparing for future challenges, protects the broad range of U. S. national security interests, advances the Department's efforts to rebalance and re-

form, and supports the national security imperative of deficit reduction through a lower level of defense spending.

This strategic guidance document describes the projected security environment and the key military missions for which the Department of Defense (DoD) will prepare. It is intended as a blueprint for the Joint Force in 2020, providing a set of precepts that will help guide decisions regarding the size and shape of the force over subsequent program and budget cycles, and highlighting some of the strategic risks that may be associated with the proposed strategy.

2. Review by the White House on Defense Strategic Guidance

Our Nation is at a moment of transition. Thanks to the extraordinary sacrifices of our men and women in uniform, we have responsibly ended the war in Iraq, put al-Qa'ida on the path to defeat, including delivering justice to Osama bin Laden and made significant progress in Afghanistan, allowing us to begin the transition to Afghan responsibility. At the same time, we must put our fiscal house in order here at home and renew our long-term economic strength. To that end, the Budget Control Act of 2011 mandates reductions in federal spending, including defense spending.

As Commander in Chief, I am determined that we meet the challenges of this moment responsibly and that we emerge even stronger in a manner that preserves American global leadership, maintains our military superiority and keeps faith with our troops, military families and veterans, I therefore directed this review to identify our strategic interests and guide our defense priorities and spending over the coming decade.

This review has been shaped by America's enduring national security interests. We seek the security of our Nation, allies and partners. We seek the prosperity that flows from an open and free international economic system. And we seek a just and sustainable international order where the rights and responsibilities of nations and peoples are upheld, especially

the fundamental rights of every human being.

Indeed, as we end today's wars, we will focus on a broader range of challenges and opportunities, including the security and prosperity of the Asia Pacific. As a new generation across the Middle East and North Africa demands their universal rights, we are supporting political and economic reform and deepening partnerships to ensure regional security. In contrast to the murderous vision of violent extremists, we are joining with allies and partners around the world to build their capacity to promote security, prosperity, and human dignity. And the growing capabilities of allies and partners, as demonstrated in the successful mission to protect the Libyan people, create new opportunities for burden-sharing.

Meeting these challenges cannot be the work of our military alone, which is why we have strengthened all the tools of American power, including diplomacy and development, intelligence, and homeland security. Going forward, we will also remember the lessons of history and avoid repeating the mistakes of the past when our military was left ill-prepared for the future. As we end today's wars and reshape our Armed Forces, we will ensure that our military is agile, flexible, and ready for the full range of contingencies. In particular, we will continue to invest in the capabilities critical to future success, including intelligence, surveillance, and reconnaissance; counterterrorism; countering weapons of mass destruction; operating in anti-access environments; and prevailing in all domains, including cyber.

Most importantly, we will keep faith with our troops, military families and veterans who have borne the burden of a decade of war and who make our military the best in the world. Though we must make hard fiscal choices, we will continue to prioritize efforts that focus on wounded warriors, mental health, and families. And as our newest veterans rejoin civilian life, we continue to have a moral obligation—as a government and as a

Nation—to give our veterans the care, benefits, and the job opportunities they deserve.

The fiscal choices we face are difficult ones, but there should be no doubt—here in the United States or around the world—we will keep our Armed Forces the best-trained, best-led, best-equipped fighting force in history. And in a changing world that demands our leadership, the United States of America will remain the greatest force for freedom and security that the world has ever known.

3. Remarks by the Secretary of Defense

I am releasing new strategic guidance for the Department of Defense to articulate priorities for a 21st century defense that sustains U. S. global leadership. This guidance reflects that President's strategic direction to the Department and was deeply informed by the Department's civilian and military leadership, including the Joint Chiefs of Staff, the Secretaries of the Military Departments, and the Combatant Commanders.

This country is at a strategic turning point after a decade of war and, therefore we are shaping a Joint Force for the future that will be smaller and leaner, but will be agile, flexible, ready, and technologically advanced. It will have cutting edge capabilities, exploiting our technological, joint and networked advantage. It will be led by the highest quality, battle-tested professional. It will have global presence emphasizing the Asia-Pacific and the Middle East while still ensuring our ability to maintain our defense commitments to Europe, and strengthening alliances and partnerships across all regions. It will preserve our ability to conduct the missions we judge most important to protecting core national interests: defeating al-Qa'ida and its affiliates and succeeding in current conflicts; deterring and defeating aggression by adversaries, including those seeking to deny our power projection; countering weapons of mass destruction; effectively operating in cyberspace, space, and across all domains; main-

taining a safe and effective nuclear deterrent; and protecting the homeland.

The Joint Force will be prepared to confront and defeat aggression anywhere in the world. It will have the ability to surge and regenerate forces and capabilities, ensuring that we can meet any future threats, by investing in our people and a strong industrial base. It will remain the world's finest military.

4. Article 5 of the Washington Treaty

The Parties agree that an armed attack against one or more of them in Europe or North America shall be considered an attack against them all and consequently they agree that, if such an armed attack occurs, each of them, in exercise of the right of individual or collective self-defense recognized by Article 51 of the Charter of the United Nations, will assist the Party or Parties so attacked by taking forthwith, individually and in concert with the other Parties, such action as it deems necessary, including the use of armed force, to restore and maintain the security of the North Atlantic area.

Any such armed attack and all measures taken as a result thereof shall immediately be reported to the Security Council. Such measures shall be terminated when the Security Council has taken the measures necessary to restore and maintain international peace and security.

NATO's Strategic Concept recognizes the risks to the Alliance posed by terrorism.

Article 5 is at the basis of a fundamental principle of the North Atlantic Treaty Organization. It provides that if a NATO Ally is the victim of an armed attack, each and every other member of the Alliance will consider this act of violence as an armed attack against all members and will take the actions it deems necessary to assist the Ally attacked.

This is the principle of collective defense.

Words and Phrases

to recede	后退
conventional	常规的
reconnaissance	侦察
vigilant	警惕的
contingency	意外事件
NATO	北约
not on my watch	只要有我在，就绝不会发生
over-arching	首要的
deliberations	[常作复数]（做出决定前的）磋商；商议
deterrence	威慑
to address	处理；对付
Article 5	《华盛顿公约》第五条
drawdown	减少
Marine Corps	海军陆战队
to retain	保持
to institutionalize	使制度化
reversibility	可逆性
National Guard and Reserve	国民警卫队和预备役
NCO（Non-Commissioned Officer）	军士

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